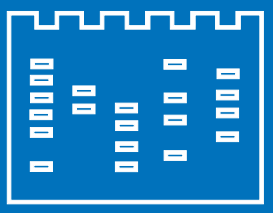
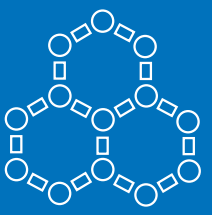
SERVA

Catalog 2021





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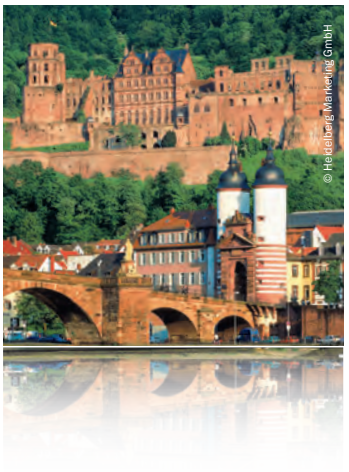


SERVA

SERVA Electrophoresis GmbH
Carl-Benz-Str. 7 • D-69115 Heidelberg • Germany
E-Mail: info@serva.de • Internet: www.serva.de

Catalog 2021

That's new

Our intention is to add innovative products to our portfolio constantly for your research needs:

- New enzymes like dsDNase for highly specific degradation of doubled-stranded DNA and Zymolyase® to produce yeast protoplast or spheroplast
- Tergitol™ as an alternative to Triton X-100
- Easy Peel 2D HPE™ gels for blotting of horizontal 2D gels
- New protein standards, e.g. SERVA Unstained Protein Standard 6.5 - 97 kDa
- BlueVertical™ PRiME™ Blot Modul for SERVA's BV-104 electrophoresis tank
- IPG tray with electrode lid for 1st dimension protein separation on 7 cm to 24 cm IPG strips
- Special Pharma Edition of SERVA BlueStain automated gel staining device

Our services

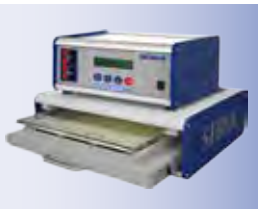
Benefit from SERVA's expertise in development and manufacturing, know-how and technical competence. This is our platform of outstanding customer services – All you need to succeed:

- Educational: workshops, seminars, webinars
- Instrument qualification: IQ/OQ/PQ
- Sample-to-result development: customer specific gel electrophoresis applications
- Customized reagents: sourcing, larger pack sizes, production of buffers and solutions

About us

SERVA products are present in your labs worldwide - the bench is our playground. The company's commitment „Serving Scientists" is your invitation to the BlueWorld: explore our products, innovations and services. SERVA fulfills highest standards in quality management to deliver consistent product performance and continuity of supply. SERVA is ISO certified and commited to working safety and environmental protection.

Products A – Z page 2 | Appendix page 177



ABTS

see 14364 2,2'-Azinobis(3-ethylbenzthiazoline-6-sulfonic acid)·2NH_4-salt, page 15

Acetic acid 100 % analytical grade

(Glacial acetic acid)
$C_2H_4O_2$ ♦ M_r 60.05 ♦ CAS [64-19-7]

DANGER
H226-H314 ♦ GGVSE/ADR 8 II UN2789 ♦ IATA 8 II UN2789 ♦ EINECS 200-580-7 ♦ WGK 1 L ♦ HS 29152100

Solvent widely utilized for various oxidation reactions. Used in fixing solutions of polyacrylamide gels.

Assay (GC)	min. 99.8 %
Density (20 °C)	1.05

Cat.No.	Size
45633.01	1 L
45633.02	2,5 L

Acetic acid 100 % for LC-MS

(Glacial acetic acid)
$C_2H_4O_2$ ♦ M_r 60.05 ♦ CAS [64-19-7]

DANGER
H226-H314 ♦ EG-Index 607-002-00-6 ♦ GGVSE/ADR 8 II UN2789 ♦ IATA 8 II UN2789 ♦ EINECS 200-580-7 ♦ HS 29152100

Additive for eluent phase for LC-MS.

Assay (GC)	min. 99.95 %
Refractive index (20 °C)	1.3711 - 1.3731
Water (KF)	≤ 0.1 %
Residue on evaporation	≤ 5 ppm
Transmittance	
254 nm	min. 30.0 %
260 nm	min. 80.0 %
270 nm	min. 95.0 %
280 nm	min. 97.0 %
Metal Compounds	
Al	max. 0.05 ppm
Fe	max. 0.2 ppm
Na	max. 0.5 ppm
Ca/K/Mg	max. 0.1 ppm

Cat.No.	Size
45638.01	50 ml

Acetone research grade

(2-Propanone; Dimethylketone)
C_3H_6O ♦ M_r 58.08 ♦ CAS [67-64-1]

DANGER
H225-H319-H336 ♦ EG-Index 606-001-00-8 ♦ GGVSE/ADR 3 II UN1090 ♦ IATA 3 II UN1090 ♦ EINECS 200-662-2 ♦ WGK 1 L ♦ HS 29141100

Solvent used in protein precipitation and as fixative in histology.

Assay (GC)	min. 99.0 %
Density (20 °C)	0.790 - 0.793
Water	max. 0.30 %

Cat.No.	Size
45632.01	1 L

Acetonitrile for HPLC

C_2H_3N ♦ M_r 41.05 ♦ CAS [75-05-8]

DANGER
H225-H302-H312-H319-H332 ♦ MAK/TRK 20 ml/m³; 34 mg/m³ ♦ EG-Index 608-001-00-3 ♦ GGVSE/ADR 3 II UN1648 ♦ IATA 3 II UN1648 ♦ EINECS 200-835-2 ♦ WGK 2L ♦ HS 29269095

Special grade for use as a mobile phase component in chromatographic techniques.

Assay (GC)	min. 99.9 %
Density (20 °C)	0.782 - 0.783
Boiling point	81.6 °C
Refractive Index	1.3430 - 1.3450
Maximum Impurity Levels:	
Water	max. 0.005 %
Minimum Transmission Levels	
1 cm cell compared against HPLC water	
240 nm	min. 99.0 %
254 nm	min. 99.0 %

Cat.No.	Size
45605.01	2,5 L

Acetonitrile for UHPLC-MS

C_2H_3N ♦ M_r 41.05 ♦ CAS [75-05-8]

DANGER
H225-H302-H312-H319-H332 ♦ EG-Index 608-001-00-3 ♦ GGVSE/ADR 3 II UN1648 ♦ IATA 3 II UN1648 ♦ EINECS 200-835-2 ♦ HS 29269070

Special grade for excellent performance in ultra high performance liquid chromatography-tandem mass spectrometry (UHPLC-MS/MS).

Assay (GC)	min. 99.99 %
Refractive index (20 °C)	1.342 - 1.346
Acidity	≤ 0.0003 meq/g
Alkalinity	≤ 0.0002 meq/g
Water (KF)	≤ 100 ppm
Residue on evaporation	≤ 1 ppm
Transmittance	
191 nm	min. 40.0 %
195 nm	min. 80.0 %
200 nm	min. 95.0 %
215 nm	min. 97.0 %
≥ 230 nm	min. 99.0 %
Absorbance	
220 nm	max. 0.01 AU
254 nm	max. 0.005 AU
Fluorescence (quinine)	
365 nm	max. 0.5 ppb
450 nm	max. 0.5 ppb
UHPLC gradient peak	
210 nm	max. 0.4 mAU
Drift at 210 nm	max. 6 mAU
Drift at 254 nm	max. 2 mAU
Test LC-MS TIC (50 – 2000 m/z)	
ES I(+)	
Sensitive impurities (reserpine)	max. 30 ppb
Metal Compounds	
Na/K/Ca	max. 50 ppb
Al/Fe/Mg	max. 20 ppb

Microfiltered, 0.1 µm

Cat.No.	Size
45634.01	1 L
45634.02	2,5 L

Acetyl-L-leucyl-L-leucyl-L-argininal

see 51867 Leupeptin, page 77

Acetylthiocholine·iodide research grade

$C_7H_{16}N^+OS·I^-$ ♦ M_r 289.2 ♦ CAS [1866-15-5]

DANGER
H301-H312 ♦ GGVSE/ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦ EINECS 217-474-1 ♦ WGK 3L ♦ HS 29309099
Storage temperature +2 °C to +8 °C

Cholinesterase substrate (1). The liberated thiol group is estimated using 5,5'-dithiobis(2-nitrobenzoic acid) (2).

Assay (titr.) min. 98.0 %

References:
1. Ellman, G.L. et al. (1961) Biochem. Pharmacol. ***7,*** 88-95
2. Ellman, G. & Callaway, E. (1961) Nature ***192,*** 1216-7

Cat.No.	Size
10570.01	1 g
10570.02	5 g
10570.03	25 g

Achromycin·HCl

see 35866 Tetracycline·HCl, page 147

Acid Blue 15

see 35053 SERVA Blue W, page 110

Acid Blue 83

see 35051 SERVA Blue R, page 110

Acid Blue 90

see 35050 SERVA Blue G, page 110

Acid Red 112

see 33429 Ponceau S, page 91

Acid Red 14

see 14410 Azorubin, page 15

Acid Red 87

see 21005 Eosin Y·Na-salt, page 45

Acid Violet 17

see 35072 SERVA Violet 17, page 124

Acid Violet 19

see 34597 Fuchsin acid, page 51

Acrylamide 2X research grade

C_3H_5NO ♦ M_r 71.1 ♦ CAS [79-06-1]

DANGER
H301-H312-H315-H317-H319-H332-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ MAK/TRK 0,03mg/m³ ♦ EG-Index 616-003-00-0 ♦ GGVSE/ADR 6.1 III UN2074 ♦ IATA 6.1 III UN2074 ♦ EINECS 201-173-7 ♦ WGK 3L ♦ HS 29241900
Storage temperature +2 °C to +8 °C

Standard quality, applicable to general electrophoretic separations.

Assay (HPLC)	min. 98.0 %
A 290 nm	max. 0.7 (5 %)
pH	5.0 - 8.0 (5 %)
Conductivity (µS/cm)	max. 100 (40 %)
Acrylic acid (titr.)	max. 0.03 %

Cat.No.	Size
10675.02	1 kg

Acrylamide 4X analytical grade

C_3H_5NO ♦ M_r 71.1 ♦ CAS [79-06-1]

DANGER
H301-H312-H315-H317-H319-H332-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ MAK/TRK 0,03 mg/m³ ♦ EG-Index 616-003-00-0 ♦ GGVSE/ADR 6.1 III UN2074 ♦ IATA 6.1 III UN2074 ♦ EINECS 201-173-7 ♦ WGK 3L ♦ HS 29241900
Storage temperature +2 °C to +8 °C

Quality of analytical grade, applicable to all electrophoresis techniques. Recrystallized. Polymerizing time: max. 30 min (3 mM TEMED / 3 mM APS, 15 % gel).

Assay (HPLC)	min. 99.0 %
A 290 nm	max. 0.6 (5 %)
pH	5.0 - 8.0 (5 %)
Conductivity (µS)	max. 20 (40 %)
Content of free acrylic acid	max. 0.002 %

Cat.No.	Size
10674.03	1 kg

Acrylamide 4X molecular biology grade

C_3H_5NO ♦ M_r 71.1 ♦ CAS [79-06-1]

DANGER
H301-H312-H315-H317-H319-H332-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ MAK/TRK 0,03mg/m³ ♦ EG-Index 616-003-00-0 ♦ GGVSE/ADR 6.1 III UN2074 ♦ IATA 6.1 III UN2074 ♦ EINECS 201-173-7 ♦ WGK 3L ♦ HS 29241900
Storage temperature +2 °C to +8 °C

DNase and RNase: non-detectable. Special quality for use in molecular biological applications as well as all electrophoresis techniques.

Assay (GC)	min. 99.0 %
A 290 nm	max. 0.6 (5 %)
pH	5.0 - 8.0 (5 %)
Conductivity (µS)	max. 20 (40 %)
Content of free acrylic acid	max. 0.002 %

Cat.No.	Size
10678.02	100 g

Acrylamide 4X Solution (40 % w/v)

DANGER
H302-H312-H315-H317-H319-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ GGVSE/ADR 6.1 III UN3426 ♦ IATA 6.1 III UN3426 ♦ WGK 3 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Solution contains 40 % (w/v) highly purified acrylamide in deionized water.

A 290 nm	max. 0.6 (5 %)
pH	6.0 - 8.0 (5 %)
Conductivity (µS)	max. 100
Content of free acrylic acid	max. 0.03 %

Cat.No.	Size
10677.01	1 L

Acrylamide/Bis Solution, 19:1 (40 % w/v), 5 % C

DANGER
H302-H312-H315-H317-H319-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ GGVSE/ADR 6.1 III UN3426 ♦ IATA 6.1 III UN3426 ♦ WGK 3 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Solution of acrylamide and N,N'-methylene bisacrylamide (Bis) in deionized water. Convenient to use, reduced risk of neurotoxic acrylamide dust in the air. Applicable to all electrophoresis techniques.

A 290 nm	< 0.7 (5 %)
pH	6.0 - 8.0 (5 %)
Conductivity (µS)	< 100
Content of free acrylic acid	< 0.03 %

Cat.No.	Size
10679.01	500 ml
10679.02	4 x 500 ml
10679.03	1 L

Acrylamide/Bis Solution, 29:1 (30 % w/v), 3.3 % C

DANGER
H302-H312-H315-H317-H319-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ GGVSE/ADR 6.1 III UN3426 ♦ IATA 6.1 III UN3426 ♦ WGK 3 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Solution of acrylamide and N,N'-methylene bisacrylamide (Bis) in deionized water. Convenient to use, reduced risk of neurotoxic acrylamide dust in the air. Applicable to all electrophoresis techniques.

A 290 nm	< 0.7 (5 %)
pH	6.0 - 8.0 (5 %)
Conductivity (µS)	< 100
Content of free acrylic acid	< 0.03 %

Cat.No.	Size
10687.01	500 ml
10687.02	4 x 500 ml
10687.03	1 L

Acrylamide/Bis Solution, 29:1 (40 % w/v), 3.3 % C

DANGER
H302-H312-H315-H317-H319-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ GGVSE/ADR 6.1 III UN3426 ♦ IATA 6.1 III UN3426 ♦ WGK 3 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Solution of acrylamide and N,N'-methylene bisacrylamide (Bis) in deionized water. Convenient to use, reduced risk of neurotoxic acrylamide dust in the air. Applicable to all electrophoresis techniques.

A 290 nm	< 0.7 (5 %)
pH	6.0 - 8.0 (5 %)
Conductivity (µS)	< 100
Content of free acrylic acid	< 0.03 %

Cat.No.	Size
10680.01	500 ml
10680.02	4 x 500 ml
10680.03	1 L

Acrylamide/Bis Solution, 37.5:1 (30 % w/v), 2.6 % C

DANGER
H302-H312-H315-H317-H319-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ GGVSE/ADR 6.1 III UN3426 ♦ IATA 6.1 III UN3426 ♦ WGK 3 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Solution of acrylamide and N,N'-methylene bisacrylamide (Bis) in deionized water. Convenient to use, reduced risk of neurotoxic acrylamide dust in the air. Applicable to all electrophoresis techniques.

A 290 nm	< 0.7 (5 %)
pH	6.0 - 8.0 (5 %)
Conductivity (µS)	< 100
Content of free acrylic acid	< 0.03 %

Cat.No.	Size
10688.01	500 ml
10688.02	4 x 500 ml
10688.03	1 L

Acrylamide/Bis Solution, 37.5:1 (40 % w/v), 2.6 % C

DANGER
H302-H312-H315-H317-H319-H340-H350-H361f-H372 ♦ Muta. 1B, Carc. 1B, Repr. 2 ♦ GGVSE/ADR 6.1 III UN3426 ♦ IATA 6.1 III UN3426 ♦ WGK 3 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Solution of acrylamide and N,N'-methylene bisacrylamide (Bis) in deionized water. Convenient to use, reduced risk of neurotoxic acrylamide dust in the air. Applicable to all electrophoresis techniques.

A 290 nm	< 0.7 (5 %)
pH	6.0 - 8.0 (5 %)
Conductivity (µS)	< 100
Content of free acrylic acid	< 0.03 %

Cat.No.	Size
10681.01	500 ml
10681.02	4 x 500 ml
10681.03	1 L

Actidione®

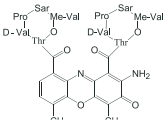
see 10700 Cycloheximide, page 35

Actinase E

see 33635 Pronase E from *Streptomyces griseus* min. 5 DMC-U/mg, page 92

Actinomycin D cryst. research grade

(Dactinomycin; Actinomycin C_1)
$C_{62}H_{86}N_{12}O_{16}$ ♦ M_r 1255.5 ♦ CAS [50-76-0]



DANGER
H300 ♦ GGVSE/ADR 6.1 II UN2811 ♦ IATA 6.1 II UN2811 ♦ EINECS 200-063-6 ♦ WGK 3L ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Chromopeptide with antibiotic activity. Contains 2 cyclic peptides bound to the chromophoric phenoxazone ring. Binds specifically to the minor groove of the DNA double helix, and thus prevents it from being a template for RNA synthesis. Antineoplastic agent which inhibits the growth of rapidly dividing cells. Induces apoptosis in cancer cells. Used as a selective agent in cell culture.

References:

1. Meienhofer, B. & Atherton, E. (1977) Adv. Appl. Microbiol. ***16,*** 203
2. Kleef, J. et al. (2000) Int. J. Cancer ***86***, 399-407
3. Narita, Y. et al. (2000) Cancer Chemother. Pharmacol. ***45***, 149-56

Cat.No.	Size
10710.01	5 mg

Activated Charcoal

see 30890 Norit® A, page 84

Adapter Set (2 x 2)

HS 90272000

Cat.No.	Size
AS-01	1 kit

Adenine analytical grade

(6-Aminopurine)
$C_5H_5N_5$ ♦ M_r 135.1 ♦ CAS [73-24-5]

DANGER
H301 ♦ GGVSE/ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦ EINECS 200-796-1 ♦ WGK 1 ♦ HS 29335995

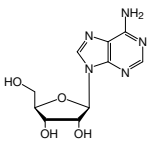
Synthetic, therefore free of any contamination with related natural products. It is used as media component in cell culture of mammalian cells, yeast and plants.

Assay (titr.)	98.0 - 102.0 %

Cat.No.	Size
10739.02	25 g

Adenosine research grade

(9-β-D-Ribofuranosyladenine)
$C_{10}H_{13}N_5O_4$ ♦ M_r 267.2 ♦ CAS [58-61-7]
EINECS 200-389-9 ♦ WGK 1 ♦ HS 29389090



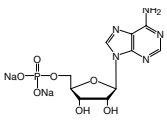
Adenosine is an important molecule that forms the nucleotides adenosine monophosphate, adenosine diphosphate and adenosine triphosphate.
It has been used as a supplement in Dulbecco's modified Eagle medium (DMEM) and plasmid transfection and cloning of embryonic stem cells.

Assay (HPLC)	min. 97.0 %
Water (Loss on drying)	max. 0.5 %

Cat.No.	Size
10770.02	25 g

Adenosine-5'-phosphate·Na_2-salt analytical grade

(AMP)
$C_{10}H_{12}N_5O_7P{\cdot}Na_2{\cdot}7H_2O$ ♦ M_r 517.2 ♦ CAS [4578-31-8]



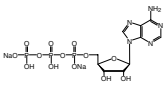
EINECS 224-961-2 ♦ WGK 1 ♦ HS 29389090
Storage temperature +2 °C to +8 °C
Adenosine 5'-monophosphate (5'-AMP) is a substrate of enzymes such as AMP deaminase or 5'-nucleotidase and an activator of AMP-activated protein kinases.

Assay (HPLC)	min. 95.0 %
Water (KF)	max. 26.0 %

Cat.No.	Size
10883.01	5 g

Adenosine-5'-triphosphate·Na_2-salt cryst. research grade

(ATP)
$C_{10}H_{14}N_5O_{13}P_3 \cdot Na_2$ ♦ M_r 551.1 ♦ CAS [987-65-5]



EINECS 213-579-1 ♦ WGK 1 ♦ HS 29389090
Storage temperature -15 °C to -25 °C

Adenosine 5'-triphosphate (ATP) is a substrate of many kinases involved in cell signaling and of adenylate cyclases. ATP provides the metabolic energy to drive metabolic pumps. It serves as a coenzyme in a wide array of enzymatic reactions and is used for tissue preparation

Assay (HPLC)	min. 98.0 %
Water (KF)	max. 8.0 %

Cat.No.	Size
10920.01	1 g
10920.02	5 g
10920.03	25 g

Adhesive tape

HS 39269097

33 m x 9 mm x 0.15 mm. Especially suitable as spacer in the preparation of thin layer gels using the flap technique.

Cat.No.	Size
42927.01	1 piece

Adogen 464

see 37076 Trioctylmethylammonium chloride, page 150

AEBSF-HCl research grade

(4-(2-Aminoethyl)-benzene sulfonyl fluoride hydrochloride)
$C_8H_{10}FNO_2S \cdot HCl$ ♦ M_r 239.7 ♦ CAS [30827-99-7]

WGK 1 ♦ HS 29214900
Storage temperature +2 °C to +8 °C

Irreversible inhibitor of thrombin and other serine proteases (e.g. chymotrypsin, kallikrein, plasmin, proteinase K, trypsin). Inhibits by acylation of the active site of the enzyme. AEBSF is water-soluble and much less toxic than PMSF and DFP. Aqueous solutions are stable between pH 5 - 6; limited stability above pH 7.5.

Assay (HPLC)	min. 98.0 %

References:
1. Walsmann, P. et al. (1972) Acta biol. med. germ. ***28***, 577-585
2. Marwardt, F. et al. (1973) Thrombosis Res. ***2***, 343-348
3. Taylor, J.A. et al. (1995) Immunology ***86***, 629-635

Cat.No.	Size
12745.01	100 mg
12745.02	500 mg
12745.03	1 g

Aerosporin

see 47976 Polymyxin-B·sulfate, page 90

Agar Agar SERVA powder analytical grade

CAS [9002-18-0]

EINECS 232-658-1 ♦ WGK 1 ♦ HS 13023100

Highly purified. Suitable for immunodiffusion.

Gel strength (g/cm², 1.5 % gel)	min. 600
Point of solidification	39 - 43 °C
Loss on drying	max. 10.0 %
Ash	max. 4.0 %
pH (1,5%) in water (60 °C)	6.5 - 7.5

Cat.No.	Size
11393.02	100 g
11393.03	250 g
11393.04	1 kg

Agar Agar SERVA High Gel-Strength powder research grade

CAS [9002-18-0]

EINECS 232-658-1 ♦ WGK 1 ♦ HS 13023100

Choice quality for *in vitro* culture of plants or bacteriology, no turbidity with phosphates.

Gel strength (g/cm², 1.5 % gel)	min. 700
Point of solidification	34 - 38 °C
Loss on drying	max. 10.0 %
Ash	max. 4 %
pH 1.5 % in water (60 °C)	6.0 - 8.0

Cat.No.	Size
11396.02	250 g
11396.03	1 kg
11396.04	5 kg

Agar Agar SERVA Kobe I in stripes, research grade

CAS [9002-18-0]

EINECS 232-658-1 ♦ WGK 1 ♦ HS 13023100

Threadlike, bleached; tested for use in nutrient media.

Gel strength (g/cm², 1.5 % gel)	> 400
Point of solidification	30 - 40 °C
Loss on drying	max. 25.0 %
Ash	max. 6.5 %
pH 1.5 % in water (60 °C)	5.0 - 8.0

Cat.No.	Size
11395.03	1 kg
11395.04	5 kg

Agar Agar SERVA Kobe I powder, research grade

CAS [9002-18-0]

EINECS 232-658-1 ♦ WGK 1 ♦ HS 13023100

Choice quality for bacteriology.

Gel strength (g/cm², 1.5 % gel)	min. 800
Point of solidification	35 - 42 °C
Loss on drying	max. 22.0 %
Ash	max. 1.5 %
pH 1.5 % in water (60 °C)	5.0 - 8.0

Cat.No.	Size
11392.03	1 kg
11392.04	5 kg

Agar Substitute

see 22168 Gelrite®, page 53

Agarose SERVA 3:1 molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ HS 39139000

Unique mixture of agarose formulated for high resolution of small (10 bp - 1000 bp) DNA, RNA and PCR fragments. High purity for low background even at high gel concentrations (up to 6 % in 1x TAE buffer). Optimized gel strength for easy-to-handle gels. Special quality tested for applications in molecular biology. Manufactured using an innovative organic solvent-free manufacturing process.

Gelling temperature (1.5 %)	max. 36 °C
Gel strength (1.5 %)	min. 650 g/cm²
Electro endosmosis (EEO)	≤ 0.1

Cat.No.	Size
11385.01	25 g
11385.02	100 g

Agarose SERVA FastSolve Tablets, 0.5 g/Tablet
molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ HS 39139000

Fast dissolving, multi-purpose agarose tablets delivered in a convenient blister pack. The tablets are made of standard melting point agarose for high resolution of DNA and RNA (100 bp – ≥ 30 kb) with high clarity and low background. There is no need to weigh the agarose reducing the hands-on-time to < 1 min. Optimized gel strength for easy-to-handle gels. Special quality tested for applications in molecular biology. Manufactured using an innovative organic solvent-free manufacturing process.

Gelling temperature (1.5 %)	34 - 38 °C
Gel strength (1.0 %)	min. 1200 g/cm²
Electro endosmosis (EEO)	≤ 0.13

Cat.No.	Size
11407.01	200 tablets

Agarose SERVA research grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

Agarose with low EEO for analytical and preparative gel electrophoresis and blotting of DNA/RNA fragments > 500 bp.

Gelling temperature (1.5 %)	34 - 38 °C
Gel strength (1.5 %)	> 1100 g/cm²
Electro endosmosis (EEO)	0.05 - 0.13

Cat.No.	Size
11380.01	25 g
11380.02	100 g
11380.03	250 g
11380.05	500 g

Agarose SERVA Wide Range molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ HS 39139000

For analytical and preparative electrophoresis and blotting of DNA/RNA fragments between 250 and 23,000 bp, PCR products, preparation of plasmids, screening and cleaning. Tested for applications in molecular biology.

Gelling temperature (1.5 %)	34 - 39 °C
Gel strength (1.5 %)	min. 1200 g/cm²
Electro endosmosis (EEO)	≤ 0.13

Cat.No.	Size
11406.01	250 g
11406.02	500 g
11406.03	1 kg

Agarose SERVA for DNA Electrophoresis research grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

For analytical and preparative electrophoresis of DNA fragments between 1000 and 20,000 bp. Each lot is tested for the absence of *EcoRI* inhibition.

Gelling temperature (1.5 %)	34 - 39 °C
Gel strength (1.5 %)	min. 1700 g/cm²
Electro endosmosis (EEO)	≤ 0.13

Cat.No.	Size
11404.03	100 g
11404.04	250 g
11404.07	500 g
11404.05	1 kg

Agarose SERVA Low Melting research grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

For analytical and preparative nucleic acid electrophoresis of DNA/RNA fragments > 500 bp. Highly efficient recovery of DNA fragments at low temperature for subsequent in-gel manipulations like restriction analysis or ligation reactions.

Gelling temperature (1.5 %)	max. 31 °C
Gel strength (1.5 %)	> 200 g/cm²
Electro endosmosis (EEO)	0.05 - 0.14

Cat.No.	Size
11408.01	5 g
11408.02	25 g

Agarose SERVA Premium molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

For analytical and preparative gel electrophoresis of DNA/RNA fragments > 500 bp, recovery of DNA fragments for further modifications (restriction analysis, ligation reactions), blotting of nucleic acids. Special quality tested for applications in molecular biology.

Gelling temperature (1.5 %)	34 - 38 °C
Gel strength (1.5 %)	> 1100 g/cm²
Electro endosmosis (EEO)	0.05 - 0.13

Cat.No.	Size
11381.02	100 g
11381.03	250 g

Agarose SERVA Premium Low Melting
molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

For efficient separation of DNA/RNA fragments > 500 bp, best for in-gel enzymatic processing like restriction analysis, ligation reactions, PCR and others. Ideal for digestion by agarase enzymes, making it very easy to recover or to analyse large DNA fragments by cloning or other enzymatic applications. Special tested quality for applications in molecular biology.

Gelling temperature (1.5 %)	24 - 28 °C
Gel strength (1.5 %)	> 500 g/cm²
Electro endosmosis (EEO)	≤ 0.12

Cat.No.	Size
11382.01	25 g
11382.02	100 g

Agarose SERVA for PCR molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

For analytical and preparative electrophoresis of PCR and DNA fragments > 40 bp and < 1000 bp; special quality tested for applications in molecular biology. High gel strength for better handling and enhanced visibility due to improved clarity of the gel.

Gelling temperature (1.5 %)	28 - 34 °C
Gel strength (1.5 %)	> 600 g/cm²
Electro endosmosis (EEO)	≤ 0.12

Cat.No.	Size
11383.01	25 g
11383.02	100 g

Agarose SERVA for PCR Low Melting molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

For analytical and preparative electrophoresis of PCR and DNA fragments > 40 bp and < 1000 bp. Special quality tested for applications in molecular biology. Best for fine resolution at agarose concentrations ranging from 1.8 % up to 4.5 %. Best for in-gel enzymatic processing. Ideal for digestion by agarase enzymes. Easy to recover small DNA fragments for subsequent analysis or for enzymatic modifications.

Gelling temperature (1.5 %)	ca. 26 °C
Gel strength (1.5 %)	> 200 g/cm²
Electro endosmosis (EEO)	≤ 0.10

Cat.No.	Size
11384.01	25 g
11384.02	100 g

Agarose SERVA High EEO

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

Special preparation for immunoelectrophoresis (esp. precipitation) with relatively high electroendosmosis and low gelling point.

Gelling temperature (1.5 %)	34 - 39 °C
Gel strength (1.5 %)	> 1300 g/cm²
Electro endosmosis (EEO)	0.23 - 0.27

Cat.No.	Size
11397.04	250 g

Agarose SERVA Neutral for IEF

CAS [9012-36-6]

EINECS 232-731-8 ♦ WGK 1 ♦ HS 39139000

Premium grade for isoelectric focusing. Chemically treated agarose to neutralize residual negative charge sites, virtually eliminating electroendosmosis.

Gel strength (1.5 %)	> 800 g/cm²
Electro endosmosis (EEO)	0

Cat.No.	Size
11402.02	5 g

Agarose SERVA Tablets, 0.5 g/Tablet molecular biology grade

CAS [9012-36-6]

EINECS 232-731-8 ♦ HS 39139000

Agarose pressed into tablets of 0.5 g each. For analytical and preparative electrophoresis of DNA fragments between 200 and 20,000 bp. Special quality tested for applications in molecular biology.
There is no need to weigh the agarose. Just simply disperse the requested number of tablets in running buffer for 5 minutes at room temperature and then heat the suspension in a microwave until the material is dissolved.
The achieved gel volume per tablet for different agarose concentrations is listed below:

% agarose	gel volume/tablet
0.5 %	100.0 ml
0.75 %	66.7 ml
1.0 %	50.0 ml
1.5 %	33.3 ml
2.0 %	25.0 ml

Gel. temp. (1.5 %)	34 - 39 °C
Gel strength (1.5 %)	> 1000 g/cm²
Electro endosmosis (EEO)	≤ 0.13

Cat.No.	Size
11405.01	100 g

Ala

see 11482 L-Alanine, page 7

L-Alanine research grade, Ph. Eur.

(Ala; 2-Aminopropanoic acid)
$C_3H_7NO_2$ ♦ M_r 89.1 ♦ CAS [56-41-7]

EINECS 200-273-8 ♦ WGK 1L ♦ HS 29224985

Non-essential amino acid, which can be synthesized in mammalian cells from pyruvic acid and ammonium ions. For use in bacteriology and tissue culture.

Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

References:

1. Römpp Chemie Lexikon, !0th ed. 1996-1999, Georg Thieme Verlag Stuttgart, New York
2. Müller-Esterl, W. (2011) Biochemie, 2nd ed., Spektrum Akademischer Verlag, Heidelberg

Cat.No.	Size
11482.02	100 g

Albumin Bovine cryst. lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

The purest form of our bovine albumins. Manufacturing includes a proprietary heat-shock fractionation process, ion exchange treatment and triple sequential crystallization, resulting in an extremely pure product. Best suited for use in highly sensitive systems requiring consistent protein background and as standard for protein quantification and molecular weight determination. As well used as hapten carrier for antibody production, as stabilizer of enzymes and other sensitive biopolymers and in diverse molecular biology applications. Crystal form simplifies handling and weighing.

Assay (CAF)	min. 99.0 %
pH (7 % in H_2O)	5.0 - 5.4
Moisture (KF)	max. 5.0 %

Cat.No.	Size
11920.02	1 g
11920.04	10 g
11920.06	50 g

Albumin Bovine Fraction V, pH 7.0 standard grade, lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Manufactured by a proprietary heat-shock fractionation process, using caprylic acid as an albumin stabilizer. Standard quality for many applications: protein standard, growth promoter in serum-free media for the cultivation of animal cells, supplement in microbiological nutrient media, diluent/stabilizer in diagnostic systems and of isolated enzymes, peptides or antibodies as well as blocking agent to prevent non-specific absorption in immunoassays like Western Blots, ELISA systems.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	6.8 - 7.2
Moisture (KF)	max. 5 %
Iron (µg/g, AA)	max. 15
IgG	not detectable

Cat.No.	Size
11930.01	10 g
11930.02	25 g
11930.03	100 g
11930.04	500 g

Albumin Bovine Fraction V, pH 5.2 standard grade, lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Manufactured in a similar way as cat. no. 11930 but with adjustment to pH 5.2 prior to lyophilization. Special quality for serology, antibody enhancement, bacterial and animal culture media.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	5.2 - 5.6
Moisture (KF)	max. 5.0 %

Cat.No.	Size
11922.02	25 g
11922.03	100 g

Albumin Bovine Modified Cohn Fraction V, pH 7.0 lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Produced by a modification of the Cohn procedure, including a proprietary heat-shock method and further purification steps by extensive membrane dialysis and filtration. Suitable as protein standard, in ELISA and blotting techniques, as diluent/stabilizer in diagnostic systems and in serology and as stabilizer for isolated enzymes, peptides or antibodies.

Assay (CAF)	min. 98.0 %
pH (10 % in H_2O)	6.5 - 7.5
Protease	max. 0.005 U/mg

Cat.No.	Size
11943.01	25 g
11943.02	100 g
11943.03	500 g

Albumin Bovine Fraction V receptor grade, lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Produced by a proprietary heat-shock fractionation with additional solvent treatment. Contains extremely low levels of heavy metals, alkaline earths, fatty acids, and low molecular weight impurities. First choice for diagnostic systems. Best suited as well for *in vitro* transport and binding studies, in perfusion media for analysis of hormone effects, as hapten carrier for antibody production, stabilisator for enzymes, peptides and antibodies and standard for protein quantification and molecular weight determination.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	6.8 - 7.2
Moisture (KF)	max. 5.0 %
Total lipids (mg/g)	max. 3.5
Fatty acids (mg/g)	max. 1
Iron (µg/g, AA)	max. 5
Heavy metals (µg/g, AA)	max. 20
Calcium (mg/g, AA)	max. 0.5
IgG	not detectable

Cat.No.	Size
11924.02	25 g
11924.03	100 g
11924.04	500 g

Albumin Bovine Fraction V, Protease-Free lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Manufactured by a proprietary heat-shock fractionation process; double heated to insure inactivation of proteolytic activity. Excellent for protease sensitive immunoassays, for stabilisation of proteins and enzymes in buffers and before lyophilization. Stabilizer for long-term storage of highly diluted antibodies. Blocking agent to prevent non-specific binding of proteins in immunoassays like Western Blots, ELISA systems.

Assay (CAF)	min. 98.0 %
Protease (Casein hydrolysis)	not detectable
pH (7 % in H_2O)	6.8 - 7.2
Moisture (KF)	max. 5.0 %
IgG	not detectable

Cat.No.	Size
11926.01	5 g
11926.02	25 g
11926.03	100 g
11926.04	500 g

Albumin Bovine Fraction V, Fatty Acid-Free lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Produced by a proprietary heat-shock/solvent fractionation process. Suitable for *in vitro* binding and transport studies and in diagnostic systems.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	6.8 - 7.2
Total lipids (mg/g)	max. 2
Fatty acids (mg/g)	max. 0.2
Moisture (KF)	max. 5.0 %

Cat.No.	Size
11932.02	25 g
11932.03	100 g

Albumin Bovine Fraction V, Protease and Fatty Acid-Free diagnostic grade, lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Highly purified albumin, especially designed for protease-sensitive immunoassays, such as RIA and EIA. Suitable as protein standard, diluent, enzyme stabilizer. Can be used also in hybridization and nucleic acid based assays as well as in fatty acid sensitive cell culture systems.

Assay (CAF)	min. 98.0 %
pH (10 % in H_2O)	6.5 - 7.5
Protease	max. 0.005 U/mg
Fatty acids	max. 0.01%
IgG	not detected

Cat.No.	Size
11945.01	10 g
11945.02	25 g
11945.03	100 g
11945.04	500 g

Albumin Bovine Fraction V, pH 7.0 Life Science grade, lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Highly purified albumin ideal for use in biotechnology, cell culture, diagnostics, research and other Life Science applications.
First isolated by a proprietary heat shock/organic solvent process and further purified by non-solvent based methodologies to reduce IgG and endotoxins to very low levels.
Contains > 90 % monomeric albumin that retains many of the binding, transfer and physical properties of native albumin.

Purity (CAF)	≥ 98.0 %
pH (1 % in 0.15 NaCl)	6.8 - 7.2
Moisture (Lod)	≤ 5.0 %
Heavy metals	≤ 20 ppm
IgG	≤ 50 µg/g
Mycoplasma	none detected
Viral agents	none detected

Cat.No.	Size
11946.02	100 g

Albumin Bovine Fraction V, pH 7.0 microbiological grade, lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Manufactured by a proprietary heat-shock fractionation process, using caprylic acid as albumin stabilizer. The product is furthermore solvent-treated and thoroughly diafiltered. Specially developed for the growth of *leptospira, treponemas* and other fastidious microorganisms such as mycobacteria, trypanosomes, other protozoans etc.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	6.8 - 7.2

Cat.No.	Size
11934.01	25 g
11934.02	100 g

Albumin Bovine cell culture grade

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature -15 °C to -25 °C

Cohn Analog. Specially purified albumin with an almost native composition of lipids, fatty acids and other cofactors which are important for cell culture. Suitable as cell growth supplement.

Purity (CAF)	min. 96.0 %
pH (10 % in H_2O)	6.5 - 7.5
Endotoxins	max. 3 EU/mg

Cohn Analog = registered trademark of Proliant Biologicals, USA.

Cat.No.	Size
47330.01	10 g
47330.03	100 g

Albumin Bovine Low Endotoxin biotechnology grade

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature -15 °C to -25 °C

Tested negative for mycoplasma and the bovine viruses BVD, IBR, P13, Adeno, Parvo, Rabies, Reo and Bluetongue, in accordance with 9 CFR 113.
Suitable as growth promoter in serum-free media for the cultivation of animal cells and as supplement in microbiological media.

Assay (CAF)	min. 97.0 %
pH (7 % in H_2O)	5.0 - 6.0
Moisture (KF)	0 - 8.0 %
Endotoxin (LAL)	max. 10 EU/mg
IgG	not detectable

Cat.No.	Size
47321.01	25 g

Albumin Bovine Fraction V, Very Low Endotoxin lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature -15 °C to -25 °C

Manufactured by a proprietary heat-shock fractionation process, using caprylic acid as an albumin stabilizer. The production process includes steps to ensure low endotoxin and IgG levels. Tested negative for mycoplasma and the bovine viruses BVD, IBR, P13, Adeno, Parvo, Rabies, Reo and Bluetongue, in accordance with 9 CFR 113.
Especially designed as nutrient in serum-free cell culture media. Suitable in perfusion media for hormone response studies and as hapten carrier for antibody production.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	6.8 - 7.2
Moisture (KF)	max. 5.0 %
Endotoxin (LAL)	max. 2 EU/mg

Cat.No.	Size
47324.03	25 g

Albumin Bovine Fraction V, Very Low Endotoxin, Fatty Acid-free lyophil.

(BSA)
M_r ca. 67 000 ♦ CAS [9048-46-8]

EINECS 232-936-2 ♦ WGK 1 ♦ HS 35029020
Storage temperature -15 °C to -25 °C

Manufactured by a proprietary heat-shock fractionation process, followed by treatment to lower fatty acids and lipids. The production process includes steps to ensure low endotoxin and IgG levels. Tested negative for mycoplasma and the bovine viruses BVD, IBR, P13, Adeno, Parvo, Rabies, Reo and Bluetongue, in accordance with 9 CFR 113.
Especially designed as growth factor in albumin supplemented culture media for animal cells and microorganisms. Excellent growth medium supplement for hybridomas and the production of monoclonal antibodies. Suitable for *in vitro* binding and transport studies.

Assay (CAF)	min. 98.0 %
pH (7 % in H_2O)	6.8 - 7.2
Total lipids (mg/g)	max. 2
Fatty acids (mg/g	max. 0.2
Moisture (KF)	max. 5.0 %
Endotoxin level (LAL)	max. 2 EU/mg

Cat.No.	Size
47299.03	5 g

Albumin Bovine, 30 % Solution, Polymer Enhanced

(BSA)
M_r ca. 67 000

WGK 1 ♦ HS 35029020
Storage temperature +2 °C to +8 °C

Higher avidity exclusively controlled through pure albumin polymerisation. Does not contain artificial avidity enhancers or high molecular weight agglutination potentiators (e.g. PVP, gum acacia, or dextran). Does not contain caprylic acid or other stabilizers. IgG not detectable. Suitable as diluent/stabilizer in various RIA and EIA test systems, for various serological reagents, and for cross-matching procedures and antibody screening or titration.

Protein (Biuret)	29 - 31 g/dL
pH	7.2 - 7.4
NaCl (coulometric titrator)	0.6 - 0.7 g/dL
Preservative (sodium azide)	0.08 - 0.12 g/dL

Cat.No.	Size
11937.02	100 ml

Albumin egg (ovalbumin) lyophil.

M_r ca. 45 000

HS 35021110
Storage temperature -15 °C to -25 °C

Purity (SDS PAGE)	min. 90 %
Loss on drying	max. 6.0 %

Cat.No.	Size
11842.01	1 g
11842.02	5 g

Albumin Human lyophil.

(HSA, Human serum albumin)
M_r ca. 67 000 ♦ CAS [70024-90-7]

HS 35029020
Storage temperature +2 °C to +8 °C

Suitable as cell culture supplement that functions as a carrier protein for fatty acids, growth factors, trace minerals and protects cells from damage both physically and by binding toxins. Diluent/stabilizer for antisera, enzymes, and sensitive biopolymers in order to maintain particular properties.
Each lot is tested and found to be negative for antibodies to HIV-1, HIV-2, HCV, HTLV-1, HTLV-2 and HBsAg, for syphilitic serology and for HIV-1 and HCV RNA .

Total protein	> 92.0 %
HSA purity	> 97.0 %
pH (10 % in H_2O)	6.5 – 7.4

Cat.No.	Size
11877.01	1 g
11877.02	5 g

Alcian Blue 8 GS

(Alcian Blue 8GX)
C.I.74240 ♦ M_r 1928.86 ♦ CAS [75881-23-1]

EINECS 278-333-8 ♦ WGK 2L ♦ HS 32041900

Copper phthalocyanine dye. Stain for glycoproteins in electron microscopy (1). In electrophoresis (2, 3). For determination of glycosaminoglycans (4, 5).

λ max.	610 - 625 nm
A 1 cm/0.001 % in water/λmax.	min. 0.14

References:

1. Mowry, R.W. (1956) J. Histochem. Cytochem. ***4,*** 407
2. Wardi, A.H. & Allen, W.S. (1972) Anal. Biochem. ***48,*** 621-3
3. Wardi, A.H. & Michos, G.A. (1972) Anal. Biochem. ***49,*** 607-9
4. O'Brien, J.F. & Emmerling, M.E. (1978) Anal. Biochem. ***85,*** 377-86
5. Kanwar, Y.S. & Farquhar, M.G. (1979) Proc. Natl. Acad. Sci. USA ***76,*** 4493-7

Cat.No.	Size
12021.01	10 g

Aliquat® 336

see 37076 Trioctylmethylammonium chloride, page 150

Alkaline Phosphatase from calf intestine ca. 3000 U/mg protein (ca. 60 U/µl) solution

(Orthophosphoric-monoester phosphohydrolase (alkaline optimum))
EC 3.1.3.1. ♦ M_r ca. 140 000

DANGER
H334 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Especially suitable for the preparation of EIA-conjugates. Further dialysis is unnecessary (1). In 50 % glycerol, containing 5 mM Tris, 5 mM $MgCl_2$, 0.1 mM $ZnCl_2$, pH ca. 7.0.

Unit definition: 1 U catalyzes the hydrolysis of 1 µmole of 4-nitrophenyl phosphate per minute at 37 °C, pH 9.8 (DEA buffer) (6).

Activity in other units: ca. 1100 U/mg at 25 °C, pH 9.6 (glycine buffer)

Substrates for Alkaline Phosphatase:
4-Nitrophenyl phosphate·Na_2-salt (cat.no. 30770)
5-Bromo-4-chloro-3-indoxyl-phosphate-p-toluidine-salt (BCIP) (cat.no. 15247)
Naphthol-AS-BI-phosphate (cat.no. 29988)
Naphthol-AS-MX-phosphate (cat.no. 30002)
1-Naphthyl phosphate·Na-salt (cat.no. 30130)

References:

1. Chaconas, G. & van de Sande, J.H. (1980) Methods Enzymol. ***65***, 75-85
2. Maxam, A.H. & Gilbert, W. (1980) Methods Enzymol. ***65***, 499-560
3. Williams, D.G. (1984) J. Immunol. Methods ***72***, 261-8
4. Harlow & Lane (1988) Antibodies, Cold Spring Harbor Laboratory Press, p. 349
5. Garen, A. & Levinthal, C. (1960) Biochim. Biophys. Acta ***38***, 470-83
6. Mössner, E. et al. (1980) Hoppe-Seyler's Z. Physiol. Chem. ***361,*** 543-9

Cat.No.	Size
32471.01	1 mg
32471.02	5 mg

Alu-Gel-S suspension research grade sterile

(Aluminum hydroxide Cγ)
HS 28183000

Ph. Eur. 1.3 % in water. Pyrogen free (as assayed in the supernatant), aged, salt-free.

Aluminum content	5.9 - 7.1 mg/ml
Iron	max. 15 ppm

Cat.No.	Size
12261.01	50 ml
12261.02	10 x 50 ml

Aluminium silicate

see 14515 Bentonite-SF, page 16

Amidosulfobetaine-14

see 20757 ASB-14, page 14

Amidosulfobetaine-16

see 20758 ASB-16, page 14

2-Amino-2-(hydroxymethyl)-1,3-propanediol

see 37180 Tris(hydroxymethyl)aminomethane, page 151

2-Amino-2-(hydroxymethyl)-1,3-propanediol

see 37181 Tris(hydroxymethyl)aminomethane, page 150

5-Amino-2,3-dihydro-1,4-phthalazinedione

see 28085 Luminol, page 73

L-2-Amino-3-(indolylepropionic acid)

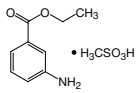
see 37422 L-Tryptophan, page 153

6-Amino-n-hexanoic acid

see 12548 ϵ-Aminocaproic acid, page 10

3-Aminobenzoic acid ethyl ester·methanesulfonate pure

(Tricaine; MS 222)
$C_9H_{11}NO_2 \cdot CH_4SO_3$ ♦ M_r 261.3 ♦ CAS [886-86-2]



WARNING
H315-H319-H335 ♦ EINECS 212-956-8 ♦ WGK 1
♦ HS 29163100

For anesthetization of fish and other cold-blooded animals.

Assay (HPLC)	min. 99.0 %
MP	147 - 152 °C

References:

1. Späth, M. & Schweickert, W. (1977) Arch. Pharmacol. ***297,*** 9-16

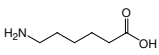
Cat.No.	Size
12396.02	5 g
12396.03	25 g

D(-)-α-aminobenzylpenicillin

see 13398 Ampicillin·Na-salt, page 12

ϵ-Aminocaproic acid analytical grade

(6-Amino-n-hexanoic acid)
$C_6H_{13}NO_2$ ♦ M_r 131.2 ♦ CAS [60-32-2]



EINECS 200-469-3 ♦ WGK 1 ♦ HS 29225000

Highly active inhibitor of fibrinolysin and chymotrypsin (1). Plasmin inhibitor in fibrinogen determinations (2). As well suitable as sample buffer component for Blue Native and Clear Native PAGE and component of semi-dry blotting buffer.

Assay (titr.)	min. 99.0 %

References:

1. Johnson, A.J. et al. (1969) Thromb. Diath. Haemorrh., Suppl. ***32,*** 105-11
2. Steffen, L. & Steffen, D. (1976) Clin. Chem. ***22,*** 381-3

Cat.No.	Size
12548.03	100 g

4-(2-Aminoethyl)-benzene sulfonyl fluoride hydrochloride

see 12745 AEBSF-HCl, page 5

4-(2-Aminoethyl)benzenesulfonylfluoride·HCl

see 31682 PEFABLOC® SC, page 89

Aminoglutaramic acid

see 22942 L-Glutamine, page 55

Aminoglutaramic acid

see 47204 L-Glutamine, page 55

L-2-Aminoglutaric acid

see 23000 L-Glutamic acid, page 55

6-[D-α-aminophenylacetamido]penicillanic acid

see 13398 Ampicillin·Na-salt, page 12

3-Aminophthalhydrazine

see 28085 Luminol, page 73

2-Aminopropanoic acid

see 11482 L-Alanine, page 7

Ammonium acetate molecular biology grade

$C_2H_7NO_2$ ♦ M_r 77.08 ♦ CAS [631-61-8]

EINECS 211-162-9 ♦ WGK 1L ♦ HS 29152900

Ammonium acetate can be used instead of sodium acetate for precipitation of nucleic acids. In general, for precipitation of DNA a 7.5 M stock solution and for RNA a 3 M stock solution are used. DNase/RNase not detected.

Assay (titr.)	min. 97.0 %

Cat.No.	Size
39750.01	500 g

Ammonium acetate solution, 7.5 M molecular biology grade

$C_2H_7NO_2$ ♦ CAS [631-61-8]

HS 38220000

7.5 M stock solution (ammonium acetate, cat. no. 39750: 578.1 g/l) for precipitation of DNA. Short oligonucleotides and free dNTPs do not coprecipitate with DNA when precipitated with NH_4OAc. Two consecutive precipitation steps are enough to remove 99 % of free dNTPs. DNase/RNase not detected.

References:

1. Ed. Ausubel et al., (1995) Current Protocols in Molecular Biology, Wiley & Sons, Inc. (New York, NY), S. 15.3.1-4.
2. Saporito-Irwin, S.M. et al., (1997) BioTechniques, ***23*** p. 424-427

Cat.No.	Size
39751.01	250 ml
39751.02	1 L

Ammonium chloride molecular biology grade

NH_4Cl ♦ M_r 53.5 ♦ CAS [12125-02-9]

WARNING
H302-H319 ♦ EG-Index 017-014-00-8 ♦ EINECS 235-186-4 ♦ WGK 1L ♦ HS 28271000

DNase/RNase not detected.

Assay (titr.)	min. 99.5 %
Heavy metals (Pb)	max. 0.0005 %
Iron (Fe)	max. 0.0002 %
Sulfate (SO_4)	max. 0.002 %
Phosphate (PO_4)	max. 0.0002 %

Cat.No.	Size
39752.01	500 g

Ammonium formate for LC-MS

(Formic acid ammonium salt)
$HCOONH_4$ ♦ Mr 63.06 ♦ CAS [540-69-2]

WARNING
H315-H319-H335 ♦ EINECS 208-753-9 ♦ WGK 1 ♦ HS 29151200

Additive for eluent phase for LC-MS.

Assay	min. 98 %
Impurities	max. 50 ppm
pH	5.5 – 7.6
Water	max. 0.5 %
Gradient Peak	
254 nm	max. 0.001 AU
Drift at 254 nm	max. 0.005 AU
Transmittance	
260 nm	min. 97 %
Metal Compounds	
Al	max. 1 ppm
Mg	max. 1 ppm
Fe	max. 3 ppm
Ca/K/Na	max. 5 ppm

Microfiltered, 0.1 µm

Cat.No.	Size
45639.01	50 g

Ammonium persulfate analytical grade

(APS; Ammonium peroxodisulfate)
$(NH_4)_2S_2O_8$ ♦ M_r 228.2 ♦ CAS [7727-54-0]

DANGER
H272-H302-H315-H317-H319-H334-H335 ♦ EG-Index 016-060-00-6 ♦ GGVSE/ADR 5.1 III UN1444 ♦ IATA 5.1 III UN1444 ♦ EINECS 231-786-5 ♦ WGK 1L ♦ HS 28334000

For use in electrophoresis. Polymerisation catalysator. Oxidizing agent of copper, for separation of manganese und chrome.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
13375.01	50 g
13375.05	250 g

Ammonium persulfate electrophoresis grade

(APS; Ammonium peroxodisulfate)
$(NH_4)_2S_2O_8$ ♦ M_r 228.2 ♦ CAS [7727-54-0]

DANGER
H272-H302-H315-H317-H319-H334-H335 ♦ EG-Index 016-060-00-6 ♦ GGVSE/ADR 5.1 III UN1444 ♦ IATA 5.1 III UN1444 ♦ EINECS 231-786-5 ♦ WGK 1L ♦ HS 28334000

Polymerisation catalyst for acrylamide/bisacrylamide polymerisation. Application proved for standard and high resolution electrophoresis techniques.

Assay (titr.)	min. 99.0 %
pH 5 % in water	3.2 - 3.9

Cat.No.	Size
13376.01	50 g
13376.02	250 g

Ammonium sulfate molecular biology grade

$(NH_4)_2SO_4$ ♦ M_r 132.2 ♦ CAS [7783-20-2]

EINECS 231-984-1 ♦ WGK 1 ♦ HS 28332980

DNase/RNase not detected.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
39753.02	1 kg

Ammonium sulfate analytical grade

$(NH_4)_2SO_4$ ♦ M_r 132.2 ♦ CAS [7783-20-2]

EINECS 231-984-1 ♦ WGK 1L ♦ HS 28332980

Suitable for enzymology.

Assay (titr.) min. 99.0 %

References:
1. Wood, W.I. (1976) Anal. Biochem. ***73,*** 250-7

Cat.No.	Size
13378.01	1 kg

AMP

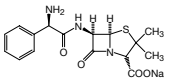
see 10883 Adenosine-5'-phosphate·Na_2-salt, page 4

Ampholytes

see 42902 SERVALYT™ 2-4, page 130

Ampicillin·Na-salt molecular biology grade, Ph. Eur.

(6-[D-α-aminophenylacetamido]penicillanic acid; D(-)-α-aminobenzylpenicillin)
$C_{16}H_{18}N_3O_4S{\cdot}Na$ ♦ M_r 371.4 ♦ CAS [69-52-3]



DANGER
H317-H334 ♦ EINECS 200-708-1 ♦ WGK 1 ♦ HS 29411000
Storage temperature +2 °C to +8 °C

Semi-synthetic derivative of penicillin. Used in molecular biology for the selection of resistant bacteria. Solubility in water: 1 part in 2 parts H_2O. Inhibitor of bacterial cell wall synthesis.

Assay 91.0 - 102.0 %

References:
1. Davies, J. & Smith, D.J. (1978) Ann. Rev. Microbiol. ***32***, 469

Cat.No.	Size
13399.01	10 g
13399.02	25 g

Ampicillin·Na-salt research grade, Ph. Eur.

(6-[D-α-aminophenylacetamido]penicillanic acid; D(-)-α-aminobenzylpenicillin)
$C_{16}H_{18}N_3O_4S{\cdot}Na$ ♦ M_r 371.4 ♦ CAS [69-52-3]

DANGER
H317-H334 ♦ EINECS 200-708-1 ♦ WGK 1 ♦ HS 29411000
Storage temperature +2 °C to +8 °C

Semi-synthetic derivative of penicillin.
Solubility in water: 1 part in 2 parts H_2O. Inhibitor of bacterial cell wall synthesis.

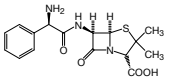
Assay 91.0 - 102.0 %

References:
1. Nguyen-Disteche, M. et al. (1974) Eur. J. Biochem. ***41***, 457-63

Cat.No.	Size
13398.01	25 g
13398.02	100 g

Ampicillin trihydrate research grade, Ph. Eur.

(6-[D(-)-α-aminophenylacetamido]penicillanic acid; D(-)-α-aminobenzylpenicillin)
$C_{16}H_{19}N_3O_4S{\cdot}3H_2O$ ♦ M_r 403.5 ♦ CAS [7177-48-2]



DANGER
H317-H334 ♦ EINECS 200-709-7 ♦ WGK 1 ♦ HS 29411000

Semi-synthetic derivative of penicillin. Inhibitor of cell wall synthesis in *E. coli.* Soluble 1 part in 150 parts H_2O as well as in diluted acids and bases. Insoluble in alcohol.

Assay (titr.) 96.0 - 100.5 %

References:
1. Nguyen-Disteche, M. et al. (1974) Eur. J. Biochem. ***41,*** 457-63

Cat.No.	Size
13397.01	10 g
13397.03	100 g

Aneurin

see 36020 Thiamine·HCl, page 148

Anion Exchangers

see 41010 DOWEX® 1X2 (50-100 mesh), page 41

Annexin V-APC Apoptosis Detection Kit 100 reactions

HS 38220000
Storage temperature +2 °C to +8 °C

Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phophatidylserine (PS). Externalization of phosphatidylserine residues in the outer plasma membrane of apoptotic cells allows detection via Annexin V. Once the apoptotic cells are bound with labelled Annexin V, they can be visualized with fluorescent microscopy or cytometry.

Since loss of membrane integrity is a pathognomonic feature of necrotic cell death, necrotic cells will stain with specific membrane-impermeant nucleic acid dyes such as propidium iodide. The membrane integrity of apoptotic cells can be demonstrated by the exclusion of these dyes.

Content: 500 µl Annexin V-APC (Allophycocyanin), 50 ml 10x Binding Buffer, 1 ml propidium iodide

Cat.No.	Size
39901.01	1 kit

Annexin V-Biotin Apoptosis Detection Kit 100 reactions

HS 38220000
Storage temperature +2 °C to +8 °C

Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phophatidylserine (PS). Externalization of phosphatidylserine residues in the outer plasma membrane of apoptotic cells allows detection via Annexin V. Once the apoptotic cells are bound with labelled Annexin V, they can be visualized with fluorescent microscopy or cytometry.

Since loss of membrane integrity is a pathognomonic feature of necrotic cell death, necrotic cells will stain with specific membrane-impermeant nucleic acid dyes such as propidium iodide. The membrane integrity of apoptotic cells can be demonstrated by the exclusion of these dyes.

Content: 500 µl Annexin V-Biotin, 50 ml 10x Binding Buffer, 1 ml propidium iodide

Cat.No.	Size
39902.01	1 kit

Annexin V-FITC Apoptosis Detection Kit 100 reactions

HS 38220000
Storage temperature +2 °C to +8 °C

Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phophatidylserine (PS). Externalization of phosphatidylserine residues in the outer plasma membrane of apoptotic cells allows detection via Annexin V. Once the apoptotic cells are bound with labelled Annexin V, they can be visualized with fluorescent microscopy or cytometry.

Since loss of membrane integrity is a pathognomonic feature of necrotic cell death, necrotic cells will stain with specific membrane-impermeant nucleic acid dyes such as propidium iodide. The membrane integrity of apoptotic cells can be demonstrated by the exclusion of these dyes.

Content: 500 µl Annexin V-FITC, 50 ml 10x Binding Buffer, 1 ml propidium iodide

Cat.No.	Size
39900.01	1 kit

Annexin V-PE Apoptosis Detection Kit 100 reactions

HS 38220000
Storage temperature +2 °C to +8 °C

Annexins are a family of calcium-dependent phospholipid-binding proteins, which bind to phophatidylserine (PS). Externalization of phosphatidylserine residues in the outer plasma membrane of apoptotic cells allows detection via Annexin V. Once the apoptotic cells are bound with labelled Annexin V, they can be visualized with fluorescent microscopy or cytometry.

Since loss of membrane integrity is a pathognomonic feature of necrotic cell death, necrotic cells will stain with specific membrane-impermeant nucleic acid dyes such as propidium iodide. The membrane integrity of apoptotic cells can be demonstrated by the exclusion of these dyes.

Content: 500 µl Annexin V-PE (R-phycoerythrin), 50 ml 10x Binding Buffer, 1 ml propidium iodide

Cat.No.	Size
39903.01	1 kit

Anode Fluid 3 for IEF

HS 38220000
Storage temperature +2 °C to +8 °C

Contains 0.17 g L-aspartic acid and 0.18 g L-glutamic acid in 50 ml water.
Recommended for general use with SERVALYT™ PRECOTES™

Cat.No.	Size
42984.03	50 ml

Anti-Corrosive Additive, 10x concentrate

WARNING
H302-H373 ♦ WGK 1 (L) ♦ HS 29053100

Added to the water circulation of the cooling unit for HPE™ BlueTower and HPE™ BlueHorizon flatbed systems to prevent corrosion.

Cat.No.	Size
43392.01	1 L

Applicator Strips 2 x 3.5

HS 39269097

19 slots, 100 mm long.
For sample application using flat bed techniques with gel layers of up to 0.5 mm thickness. Silicone rubber, length 100 x 6 x 1 mm, 19 sample slots: 2 x 3.5 mm, distance of slots: 3 mm, sample volume 5 - 10 µl.

Cat.No.	Size
42914.01	6 pieces

Applicator Strips 3.5 x 2

HS 39269097

43 slots, 240 mm long.
For sample application using flat bed techniques with gel layers of up to 0.5 mm thickness. Silicone rubber, length 240 x 6 x 1 mm, 43 sample slots: 3.5 mm x 2 mm, distance of slots: 2 mm, sample volume 5 - 10 µl.

Cat.No.	Size
42899.01	3 pieces

Applicator Strips 3.5 x 2

HS 39269097

15 slots, 100 mm long.
For sample application using flat bed techniques with gel layers of up to 0.5 mm thickness. Silicone rubber, length 100 x 6 x 1 mm, 15 sample slots: 3.5 x 2 mm, distance of slots: 3 mm, sample volume 5 - 10 µl.

Cat.No.	Size
42915.01	6 pieces

Applicator Strips 7 x 1.2

HS 39269097

24 slots, 263 mm long.
For sample application using flat bed techniques with gel layers of up to 0.5 mm thickness. Silicone rubber, length 263 x 6 x 1 mm, 24 sample slots: 7 x 1 mm, distance of slots: 3 mm, sample volume 10 - 15 µl.

Cat.No.	Size
42989.01	3 pieces

Applicator Strips Kit

HS 39269097

Contains 1 each of cat. nos. 42899, 42989, 42914, 42915

Cat.No.	Size
42937.02	1 kit

Aprotinin from bovine lung lyophil.

(Trypsin inhibitor from bovine lung; Trasylol®)
M_r ca. 6500 ♦ CAS [9087-70-1]

DANGER
H317-H334 ♦ EINECS 232-994-9 ♦ WGK 1 ♦ HS 35040090
Storage temperature +2 °C to +8 °C

Purified inhibitor of trypsin, chymotrypsin, plasmin and especially kallikrein. For *in vitro* inhibition of fibrinolytic activity in blood samples (1).

Unit definition: 1 IU (inhibitor unit) inhibits 1 U trypsin as defined by cleavage of 1 µmol BAEE (N-benzoyl-L-arginine ethyl ester) per minute (see under trypsin, cat.no. 37291).
Activity in other units: min. 3 Ph. Eur. Units (PEU)/mg, based on dried substance.
Unit definition: 1 Ph. Eur. Unit of aprotinin inhibits 50 % of the enzymatic activity of 2 microkatals trypsin, measured with BAEE as substrate at pH 8.0 and 25 °C.
Activity in other units: min. 5850 Kallikrein Inactivator Units (KIU)/mg, based on dried substance. (KIU = PEU x 60 x 32.5).

Trasylol = registered trademark of Bayer AG

References:
1. Trautschold, E. et al. (1967) Biochem. Pharmacol. ***16,*** 59-72

Cat.No.	Size
13718.01	10 mg
13718.02	25 mg
13718.03	100 mg

AquaSpark™ Alkaline Phosphatase Substrate

2 mM in DMSO

M_r 474.38

HS 38220000
Storage temperature +2 °C to +8 °C

AquaSpark™ Alkaline Phosphatase Substrate is an optimized, cost-effective chemiluminescent substrate for alkaline phosphatase detection in ELISA and Western and Southern Blots.
AquaSpark™ substrates offer unique advantages over the existing products as they can work as single agents without the need for enhancers, they have a higher efficiency and sensitivity over currently existing probes. Very high light levels are reached immediately after activation by phosphatase enzyme and a green light emission persists for 30 min or even hours.
AquaSpark™ Alkaline Phosphatase Substrate shows significantly higher signal intensities and very low background compared to other luminogenic alkaline phosphatase substrates.
100 µl will give 20 ml working solution.
Patent pending.

- No expensive additional enhancer necessary
- Use of significantly less substrate (1/5 or less)
- Strongest signal on the market
- Best signal-to-noise ratio – for highest sensitivity
- Long lasting signal on highest niveau

Cat.No.	Size
42593.01	100 µl

AquaSpark™ Alkaline Phosphatase Detection Solution

M_r 474.38

HS 38220000
Storage temperature +2 °C to +8 °C

AquaSpark™ Alkaline Phosphatase Substrate (patent pending) is an optimized, cost-effective chemiluminescent substrate for alkaline phosphatase detection in ELISA and Western and Southern Blots. AquaSpark™ substrates offer unique advantages over the existing products as they can work as single agents without the need for enhancers, they have a higher efficiency and sensitivity over currently existing probes. Very high light levels are reached immediately after activation by phosphatase enzyme and a green light emission persists for 30 min or even hours.
AquaSpark™ Alkaline Phosphatase Substrate shows significantly higher signal intensities and very low background compared to other luminogenic alkaline phosphatase substrates.

Ready-to-use solution, for development of blots use 1 - 2 ml for a membrane of 9 cm x 15 cm and in ELISA 100 µl/well.

- ◆ No expensive additional enhancer necessary
- ◆ Use of significantly less substrate (1/5 or less)
- ◆ Strongest signal on the market
- ◆ Best signal-to-noise ratio – for highest sensitivity
- ◆ Long lasting signal on highest niveau

Cat.No.	Size
42592.01	25 ml
42592.02	50 ml
42592.03	100 ml
42592.04	250 ml

AquaSpark™ Broad Range Phosphatase Substrate

2 mM in DMSO

M_r 592.13

HS 38220000
Storage temperature +2 °C to +8 °C

AquaSpark™ Broad Range Phosphatase Substrate is a chemiluminescent substrate for a variety of phosphatase enzymes including bacterial phosphatases and (calf intestine) alkaline phosphatase commonly used in immunoassays.

AquaSpark™ substrates offer unique advantages over the existing products as they can work as single agents without the need for enhancers, they have a higher efficiency and sensitivity over currently exisiting probes, they are especially designed to work under physiological conditions and can be used ex-vivo and in-vivo. Very high light levels are reached immediately after activation by phosphatase enzyme and a green light emission persists for 30 min or even hours.

AquaSpark™ Broad Range Phosphatase Substrate shows strong light emission and a very low background, making it the superior substrate for ELISA.

The substrate is suitable for sensitive detection of phosphatase-positive microorganisms such as *Staphylococcus aureus* and *Clostridium perfringens*. It can either be added directly to culture media before inoculation, facilitating online detection of luminescence development, or at the end of cultivation.

100 µl will give 20 ml working solution.

Cat.No.	Size
42594.01	100 µl

ARALDITE® Accelerator DY 964

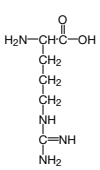
see 36975 2,4,6-Tris(dimethylaminomethyl)phenol, page 150

ARALDITE® CY 212

see 13825 Renlam® M-1, page 106

L-Arginine base research grade, Ph. Eur., USP

(Arg; L-2-Amino-5-guanidinovaleric acid)
$C_6H_{14}N_4O_2$ ♦ M_r 174.2 ♦ CAS [74-79-3]



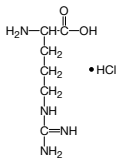
WARNING
H319 ♦ EINECS 200-811-1 ♦ WGK 1L ♦ HS 29224985

Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
13909.02	100 g
13909.03	1 kg

L-Arginine·HCl research grade, Ph. Eur., USP

(Arg HCL; L-2-Amino-5-guanidinovaleric acid hydrochloride)
$C_6H_{14}N_4O_2$·HCl ♦ M_r 210.7 ♦ CAS [1119-34-2]



EINECS 214-275-1 ♦ WGK 1 ♦ HS 29224985

Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
13940.02	100 g
13940.04	1 kg

ASB-14 research grade

(Amidosulfobetaine-14; 3-[N,N-Dimethyl(3-myristoylaminopropyl)ammonio] propanesulfonate)
HS 34021900

Zwitterionic detergent. Useful for solubilizing proteins for 2D analysis. ASB-14 shows better protein solubilization properties than CHAPS, by which the identification of previously undetected membrane proteins was enabled.

CMC	8 mM (20 – 25 °C)
Purity (HPLC)	min. 98.0 %

References:
1. Carroll, J., et al., J. Biol. Chem. ***277***, 50311
2. Herbert, B., (1999) Electrophoresis ***20***, 660
3. Chevallet, M., et al., (1998) Electrophoresis ***19***, 1901

Cat.No.	Size
20757.01	1 g
20757.02	5 g

ASB-16 research grade

(Amidosulfobetaine-16; 3-[N,N-Dimethyl-N-(3-palmitamidopropyl)ammonio] propane-1-sulfonate)
HS 34021900

Zwitterionic detergent. Useful for solubilizing proteins for 2D analysis. ASB-16 shows better protein solubilization properties than CHAPS and in some cases than ASB-14, resulting in improved detection of membrane proteins by 2D electrophoresis.

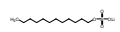
CMC	8 mM (20 – 25 °C)
Assay (HPLC)	min. 98.0 %

References:
1. Flatman, P. W., et al., (2005), J. Physiol. ***563***, 421
2. Herbert, B., (1999) Electrophoresis ***20***, 660
3. Chevallet, M., et al., (1998) Electrophoresis ***19,*** 1901

Cat.No.	Size
20758.02	5 g

ASB-C7BzO research grade

(C7BzO; 3-(4-Heptyl)phenyl-3-hydroxypropyl-dimethylammoniopropanesulfonate;
3-(4-Heptyl)phenyl-3-hydroxypropyldimethylammoniosulfobetaine)
HS 34021900



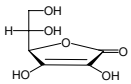
Zwitterionic detergent. Useful for solubilizing and stabilizing integral membrane proteins by disrupting aggregates. Especially well-suited to protein extraction for proteomic applications.

Assay (HPLC)	min. 96.0 %

References:
1. Luche, S., et al., (2003), Proteomics ***3***, 249
2. Tastet, C., et al., (2003), Proteomics ***3***, 111
3. Rabilloud, T., et al., (1999) Electrophoresis ***20***, 3603

Cat.No.	Size
20759.02	5 g

L-Ascorbic acid cryst. research grade, Ph. Eur.



(Vitamin C)
$C_6H_8O_6$ ♦ M_r 176.1 ♦ CAS [50-81-7]

EINECS 200-066-2 ♦ WGK 1L ♦ HS 29362700

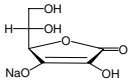
Inhibitor of β-N-acetylhexosaminidase (1).

Assay (titr.)	min. 99.0 - 100.5 %
[α] 20 °C/D (c=10 % in water)	+20.5° to + 21.5 °
Heavy metals (Pb)	max. 10 ppm

References:
1. Kanfer, J.N. & Spielvogel, C.H. (1973) Biochim. Biophys. Acta ***327***, 405-11

Cat.No.	Size
14030.02	100 g

L-Ascorbic acid·Na-salt research grade, Ph. Eur.



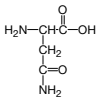
(Sodium-L-(+)-ascorbate)
$C_6H_7O_6$·Na ♦ M_r 198.1 ♦ CAS [134-03-2]

EINECS 205-126-1 ♦ WGK 1 ♦ HS 29362700

Assay (titr.) 99.0 - 101.0 %

Cat.No.	Size
14033.02	500 g

L-Asparagine·monohydrate research grade, Ph. Eur.



(Asn; L-2-Aminosuccinamic acid)
$C_4H_8N_2O_3$·H_2O ♦ M_r 150.1 ♦ CAS [5794-13-8]

EINECS 200-735-9 ♦ WGK 1L ♦ HS 29224985

Used in cell culture media and is a component of MEM non-essential amino acids solution.

Assay (titr.)	99.0 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
14110.02	100 g
14110.03	250 g
14110.04	1 kg

L-Aspartic acid research grade, Ph. Eur.

(Asp; L-Aminosuccinic acid; L-2-Aminobutanedioic acid)
$C_4H_7NO_4$ ♦ M_r 133.1 ♦ CAS [56-84-8]

EINECS 200-291-6 ♦ WGK 1L ♦ HS 29224985

Ph. Eur.

Assay (titr.)	98.5 - 101.5 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
14180.02	250 g

ATP

see 10920 Adenosine-5'-triphosphate·Na_2-salt, page 5

Auxins

see 26181 Indole-3-acetic acid, page 67

Auxins

see 26172 Indole-3-butyric acid, page 67

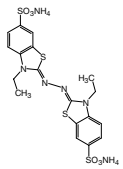
Avicel PH 101®

see 14204 Cellulose microcrystalline ca. 0.05 mm, page 26

Avicel PH 105®

see 14205 Cellulose microcrystalline ca. 0.02 mm, page 26

2,2'-Azinobis(3-ethylbenzthiazoline-6-sulfonic acid)·2NH_4-salt cryst. analytical grade



(ABTS)
$C_{18}H_{16}N_4O_6S_4$·2NH_4 ♦ M_r 548.69 ♦ CAS [30931-67-0]

WARNING
H315-H319-H335 ♦ EINECS 250-396-6 ♦ WGK 1 ♦ HS 29342080

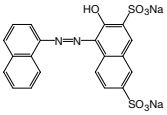
Chromogen for peroxidase in enzyme-linked immunoassay (ELISA) (1). For laccase and angiotensin I-converting enzyme assay (2).

TLC: one spot

References:
1. Groome, N.P. (1980) J. Clin. Chem. Clin. Biochem. ***18,*** 345-9
2. Shin, T. et al. (1987) Anal. Biochem. ***166,*** 380-8

Cat.No.	Size
14364.01	1 g

Azorubin pure



(Acid Red 14; Chromotrope FB)
C.I.14720 ♦ $C_{20}H_{12}N_2O_7S_2$·Na_2 ♦ M_r 502.4 ♦ CAS [3567-69-9]

EINECS 222-657-4 ♦ WGK 2L ♦ HS 29270000

λ max. (0.001 % in water)	514 - 522
A 1 cm/λ max. (0.001 % in water)	min. 0.4

Cat.No.	Size
14410.01	25 g

Bacitracin research grade, USP

(Bacidrin, Ginebatine)
M_r ca. 1422 ♦ CAS [1405-87-4]

WARNING
H315–H317–H319–H335 ♦ EINECS 215-786-2 ♦ WGK 2 ♦ HS 29419000

Storage temperature +2 °C to +8 °C

Min. 60 000 IU/g. Main component Bacitracin A. Bactericidal activity requires divalent cations like Zn^{++} (1); peptide antibiotic; inhibitor of peptidoglycan synthesis.

References:
Scogin, D. et al. (1980) Biochemistry 19, 3348-52

Cat.No.	Size
14419.01	5 g
14419.02	25 g

Basic Blue 17

see 36693 Toluidine Blue O salt, page 149

Basic Blue 9

see 29198 Methylene Blue, page 78

Basic Green 4

see 28335 Malachite green oxalate, page 74

Basic Red 5

see 30305 Neutral Red, page 82

Basic Red 9

see 31627 Parafuchsin, page 86

Basic Violet 14

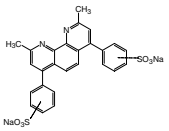
see 21916 Fuchsin basic, page 51

Basic Violet 3

see 27335 Crystal Violet, page 35

Bathocuproine disulfonic acid·Na_2-salt analytical grade

(2,9-Dimethyl-4,7-diphenyl-1,10-phenanthroline disulfonate)
$C_{26}H_{18}N_2O_6S_2 \cdot Na_2$ ♦ M_r 564.6 ♦ CAS [52698-84-7]



EINECS 258-111-7 ♦ WGK 1 ♦ HS 29339980

Strong chelator used for the spectrophotometric determination of copper and iron in biological samples and copper detection in polyacrylamide gels.

Assay (titr.) min. 98.0 %

References:
1. Bruynincky, W.J. et al. (1978) Anal. Biochem. ***89,*** 174-7

Cat.No.	Size
14470.02	1 g
14470.03	5 g

Bayol F research grade

(Paraffin oil, low viscosity; Bayol 35)
HS 27101985

Suitable as cooling fluid for use in horizontal electrophoresis.

Cat.No.	Size
14500.01	100 ml
14500.02	1 L

BCA Protein Assay Macro Kit

DANGER
H334 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

The assay bases on the bichinchoninic acid method (1). Proteins reduce alkaline Cu(II) to Cu(I). Bichinchoninic acid forms a purple complex with Cu(I) with an absorbance maximum at 562 nm. The absorbance is directly proportional to protein concentration.

- Fast and sensitive assay: linear detection range from 25 – 1000 µg protein/ml
- Easy to use: contains ready-to-use reagents and protein standard
- Compatible with many detergents
- Less binding variation between different proteins than Bradford assay

References:
1. Smith, P.K., et al. (1985) Anal. Biochem. ***150***, 76 - 85

Cat.No.	Size
39228.01	250 tests
39228.02	500 tests

BCA Protein Assay Micro Kit

DANGER
H334 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

The assay bases on the bichinchoninic acid method (1). Proteins reduce alkaline Cu(II) to Cu(I). Bichinchoninic acid forms a purple complex with Cu(I) with an absorbance maximum at 562 nm. The absorbance is directly proportional to protein concentration.

- Fast and sensitive assay: linear detection range from 0.5 – 20 µg protein/ml
- Easy to use: contains ready-to-use reagents and protein standard
- Compatible with many detergents
- Less binding variation between different proteins than Bradford assay

References:
1. Smith, P.K., et al. (1985) Anal. Biochem. ***150***, 76 - 85

Cat.No.	Size
39229.01	480 tests

BCIP

see 15247 5-Bromo-4-chloro-3-indolyl-phosphate·p-toluidine-salt, page 23

BCIP-Na_2

see 15259 5-Bromo-4-chloro-3-indolyl-phosphate·Na_2-salt, page 23

BCIP/NBT Ready-To-Use Substrate

for immunohistochemistry and blotting

HS 38220000
Storage temperature +2 °C to +8 °C

Single component substrate solution for detection of alkaline phosphatase in immunohistochemical, *in situ* hybridization and blotting procedures. A very fine blue-purple precipitate will be localized at sites of AP activity on tissue sections. Purple bands or dots will be visible at the sites of AP activity on membranes.
Contains a proprietary enhancer and a non-toxic stabilizer, which guarantee a highly sensitive and consistent performance of the substrate.

Cat.No.	Size
15246.01	100 ml

BDMA

see 14835 Benzyl dimethylamine, page 16

BEEM capsules 5.2 mm for EM-Embedding

HS 39239000

Polyethylene with pyramidal tip and polyethylene cover.

Cat.No.	Size
43510.01	100 pieces

Bentonite-SF research grade, NF

(Aluminium silicate; Montmorillonite)
CAS [1302-78-9]

EINECS 215-108-5 ♦ HS 25081000

Emulsifier and adsorbent for proteins and viruses. Conforms to NF in its gel-forming capacity. For detoxification use a 2 % aqueous suspension. Suitable for the removal of cyanate in urea solutions.

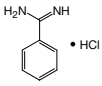
Water content	5.0 - 8.0 %
Swelling 2 % in water	min. 24 ml
pH 2 % in water	9.5 - 10.5

References:
1. Wystrup, G. et al. (1979) Eur. J. Biochem. ***100,*** 101- 13

Cat.No.	Size
14515.02	2,5 kg

Benzamidine·HCl research grade

$C_7H_8N_2 \cdot HCl$ ♦ M_r 156.62 (anhydr.) ♦ CAS [1670-14-0]



WARNING
H315-H319-H335 ♦ EINECS 216-795-4 ♦ WGK 1 ♦ HS 29252900
Storage temperature +2 °C to +8 °C

Potent inhibitor of thrombin and trypsin.

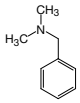
Assay (titr.)	min. 99.0 %
Water content	max. 15.0 %

References:
1. Henkel, H.J. et al. (1983) Pharmazie ***38,*** 342-6

Cat.No.	Size
14525.01	5 g

Benzyl dimethylamine research grade

(BDMA; N, N-Dimethylbenzylamine)
$C_9H_{13}N$ ♦ M_r 135.2 ♦ CAS [103-83-3]



DANGER
H226-H302-H312-H314-H332-H412
♦ EG-Index 612-074-00-7 ♦ GGVSE/ADR 8 II UN2619 ♦ IATA 8 II UN2619 ♦ EINECS 203-149-1 ♦ WGK 2L ♦ HS 29214900

Catalyst of very low viscosity for epoxy-polyester embedding in electron microscopy.

References:
1. Freeman, J.A. & Spurlock, B.O. (1962) J. Cell Biol. ***13,*** 137-43

Cat.No.	Size
14835.01	10 ml

Benzylpenicillin potassium

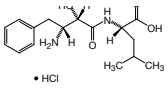
see 31749 Penicillin G·K-salt, page 87

Benzylsulfonyl fluorid

see 32395 Phenylmethylsulfonyl fluoride, page 91

Bestatin research grade

([(2S, 3R)-3-Amino-2-hydroxy-4-phenylbutanoyl]-L-leucine)
$C_{16}H_{24}N_2O_4 \cdot HCl$ ♦ M_r 344.8 ♦ CAS [65391-42-6]



WGK 1 ♦ HS 29224985
Storage temperature -15 °C to -25 °C

Aminopeptidase B and leucine aminopeptidase inhibitor (1, 2) with multi-pharmacological functions (3). Inhibitor of enkephalin degradation in cell preparations from brain (4). Anticarcinogenic (5, 6). Immunomodulating agent (7, 8). Inhibitor of leukotriene A4 hydrolase (9).

Assay (HPLC) min. 90.0 %

References:

1. Orning, L. et al. (1991) J. Biol. Chem. ***266,*** 1375-8
2. Ota, K. (1991) Biomed. Pharmacother. ***45,*** 55-60
3. Mathe, G. (1991) Biomed. Pharmacother. ***45,*** 49-54
4. Umezawa, H. et al. (1976) J. Antibiot. ***29,*** 97-9
5. Burley, S.K. et al. (1991) Proc. Natl. Acad. Sci. USA ***88,*** 6912-20
6. Cohen, M.L. et al. (1983) J. Pharmacol. Exp. Ther. ***224,*** 379-85
7. Iwahashi, M. et al. (1994) Anticancer Res. ***14,*** 1563-8
8. Ino, K. et al. (1991) Biotherapy ***3,*** 351-7
9. Umezawa, H. (1984) Rev. Infect. Dis. ***6,*** 412-20

Cat.No.	Size
14980.02	5 mg

Bind-Silane

see 28739 3-Methacryloxypropyltrimethoxysilane (Bind-Silane), page 77

BIO-5000 Plus VIS Gel Scanner

HS 90278017

The BIO-5000 Plus VIS Gel Scanner is a dual platform scanner specially designed for scanning of electrophoresis gels and blots by visual detection. It is equipped with energy-saving LEDs and an optical CCD whose resolution is up to 4,800 dpi. The range of the optical density is between 0.05 and 3.77 OD providing a smarter way to capture differences among each layer of scanned electrophoresis gels.
With a built-in auto-focus function, BIO-5000 Plus is capable of shifting the focal length to the best position automatically for images of top quality. By the design of the Emulsion Direct Image Technology (E.D.I.T.) and holders for electrophoresis gels, it is convenient to put your BIO-5000 Plus in operation and lowers the risk of mutual infection in experiments. Therefore, BIO-5000 Plus is the best choice of scanning electrophoresis gels.

- Leak-free holder for scanning wet electrophoresis gels in transmission mode
- Scanning of stained blot membranes in reflection mode
- Energy-saving LEDs as light source
- Short warm-up times
- CCD image sensor
- Resolution up to 4,800 dpi
- Dynamic range over approx. 3.7 O.D. units
- Auto-focus for highest image quality
- Easy-to-use scanning software
- Scanning area up to 216 mm x 254 mm
- IQ/OQ/PQ and FDA CFR Part 11 ready with LabImage Software

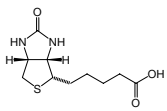
Specifications:

Scanning Modes	Color and grayscale, single scanning pass True 48-bit color 16-bit grayscale (65,536 shades of gray)
Scanning Area	Reflective: max. 216 x 356 mm Transmission: max. 216 x 254 mm
Linearity	3.7 O.D.
Resolution	4,800 dpi x 9,600 dpi
Interface	Hi-Speed USB 2.0
Dimension	385 x 158 x 567 mm
Weight	12 kg

Cat.No.	Size
BIO-5000P	1 piece

(+)-Biotin cryst. research grade, Ph. Eur., USP

(d-Biotin; Vitamin H)
$C_{10}H_{16}N_2O_3S$ ♦ M_r 244.3 ♦ CAS [58-85-5]



EINECS 200-399-3 ♦ WGK 1L ♦ HS 29362900

Tested for use in tissue culture.

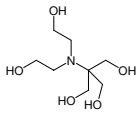
Assay (titr.)	98.5 - 100.5 %
Heavy metals	max. 10 ppm

References:

1. Bayer, E. & Wilchek, M. (1974) Methods Enzymol. ***34,*** 265-7
2. Knappe, J. (1970) Annu. Rev. Biochem. ***39,*** 757-76

Cat.No.	Size
15060.03	2,5 g

2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)-1,3-propanediol analytical grade



(Bis(2-hydroxyethyl)imino-tris(hydroxy methyl) methane; BISTRIS)
$C_8H_{19}NO_5$ ♦ M_r 209.24 ♦ CAS [6976-37-0]

EINECS 230-237-7 ♦ WGK 1 ♦ HS 29221985

Zwitterionic buffering substance for a pH range of 5.8 – 7.2 (1). Bis-Tris is used in biochemistry and molecular biology and is a common component of many buffer systems for electrophoresis. Since it may form a complex with some common metals, such as Cu(II) and Pb(II), formation constants should be taken into account when using this buffer in a solution containing metal ions. Bis-Tris is a substitute for the highly toxic buffer cacodylate.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
280 nm	max. 0.1
Iron (Fe)	max. 5 ppm
Lead (Pb)	max. 3 ppm
pH 10 % in water	9.4 - 10.4
pKa 20	6.46

References:

1. Daabo, M. & Bates, R. (1970) J. Phys. Chem. ***74,*** 702-5

Cat.No.	Size
15107.04	250 g

Bis(acrylamido)methane

see 29195 N,N'-Methylene bisacrylamide 2X, page 77

BISTRIS

see 15107 2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)-1,3-propanediol, page 18

Blank FocusGel 24S Size: 250 x 115 x 0.65 mm

HS 38220000
Storage temperature +2 °C to +8 °C

24 slots for 25 µl. To perform IEF, Blank FocusGels are equilibrated in the ampholyte mixture of choice with or without urea prior to electrophoresis.

Cat.No.	Size
43413.01	4 gels

Blank PRECOTES™ PAG layer 300 µm, Size 125 x 125 mm

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Blank PRECOTES™ were developed by SERVA to provide a versatile solution to perform isoelectric focusing (IEF) of any pH range. Blank PRECOTES™ are thin (0.3 mm) polyacrylamide gels cast onto GEL-FIX™ support film that contain only BisTris buffer pH 6.5. They are given the prefix »blank« to indicate that they are (almost) »empty« gels with a matrix that can be adapted to anything the user wants it to be.
Blank PRECOTES™ are equilibrated in the ampholyte mixture of choice prior to electrophoresis. Shelf-life of Blank PRECOTES™ is at least 12 months, either as blank gels (without ampholyte) or in the equilibrated form (with ampholyte, without urea).

PRECOTES is a registered trademark of SERVA.

Cat.No.	Size
42759.01	5 gels

Blotting Fleece sheets format: 80 mm x 85 mm

HS: 56031490

SERVA's newly developed Blotting Fleece instead of blotting paper allows an efficient, undisturbed transfer in a short time.

Cat.No.	Size
42665.01	20 sheets

BlueBlock PF (10x) for Blotting and ELISA

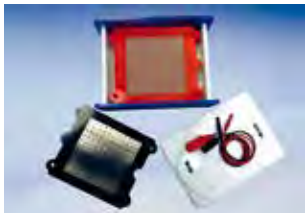
HS 38220000

Protein-free, polymer-based blocking reagent, delivered as a 10x concentrate.
To achieve a good signal-to-noise ratio in blotting, ELISA or other immuno assays, it is important to block nonspecific antibody binding sites on the transfer membrane. Protein based blocking solutions like skim milk or BSA solutions may not only block unspecific binding sites, but mask as well specific binding sites. With BlueBlock, the specific binding sites remain accessible while nonspecific reactions are suppressed, thus leading to an increase in signal intensity. It is suitable for colorimetric and chemiluminescence detection systems.

Cat.No.	Size
42591.01	250 ml
42591.02	1 L

BlueBlot Semi-Dry Blotter SD11

HS 90272000



For fast and gentle electrotransfer of proteins in Western Blots.
The BlueBlot semi-dry blotter forms a homogeneous electrical field that guarantees fast and efficient transfer of proteins from gel to membrane.
As associated with semi-dry blotting compared to tank blotting less heat is generated for gentle protein transfer. It is fast and requires less buffer. By applying the Xpress Blotting Buffer (cat. no. 42661) semi-dry transfer of high and low molecular weight proteins is done fast and efficient within 15 minutes. Moreover, all common continuous and discontinuous buffer systems can be applied without any limitation.
Anode is made from platinum-covered steel net, cathode is made from a stainless steel plate. The spring-mounted anode allows blotting of thicker gels and gel stacks. To avoid air bubbles within the blotting system the cathode carries drill holes to transport gas generated by the electro-chemically blotting process from inside to outside. The electrodes are built into a stable acrylic housing that is resistant to 10 % ethanol and easy to clean. The long-lasting electrodes can be dismounted and cleaned separately.
The BlueBlot semi-dry blotter has a blotting area of 11 cm x 11 cm. The electrode sets BB-E11 (11 cm x 11 cm) and BB-E17 (17 cm x 17 cm) are obtainable separately and fit into the same base unit. With the 17 cm x 17 cm electrode set up to 8 mini gels can be blotted simultaneously.

- Platinum-covered steel net as anode
- Spring-mounted anode for blotting stacks
- Stainless steel plate as cathode
- Blotting area: 11 cm x 11 cm
- Deployable for thicker gels and blotting stacks
- Dimensions: 31 cm x 23 cm x 11 cm
- Weight: 3 kg

Cat.No.	Size
BB-SD11	1 piece

BlueBlot Semi-Dry Blotter SD17

HS 90272000

For fast and gentle electrotransfer of proteins in Western Blots. For more information please refer to BlueBlot Semi-Dry Blotter SD11. The electrode sets BB-E11 (11 cm x 11 cm) and BB-E17 (17 cm x 17 cm) are obtainable separately and fit into the same base unit.

- Platinum-covered steel net as anode
- Spring-mounted anode for blotting stacks
- Stainless steel plate as cathode
- Blotting area: 17 cm x 17 cm
- Deployable for thicker gels and blotting stacks
- Dimensions: 31 cm x 23 cm x 11 cm
- Weight: 3 kg

Cat.No.	Size
BB-SD17	1 piece

BlueBlot Semi-Dry Blotter SD26

HS 90272000

For fast and gentle electrotransfer of proteins in Western Blots. For more information please refer to BlueBlot Semi-Dry Blotter SD11. The BlueBlot semi-dry blotter has a blotting area of 24 cm x 26 cm.

- Platinum-covered steel net as anode
- Spring-mounted anode for blotting stacks
- Stainless steel plate as cathode
- Blotting area: 24 cm x 26 cm
- Deployable for thicker gels and blotting stacks

Cat.No.	Size
BB-SD26	1 piece

BlueClear SB for antibody stripping

HS 38220000
Storage temperature +15 °C to +30 °C

Ready-to-use buffer for efficient stripping of high-affintiy antibodies from Western blot membranes after chemiluminescence detection.
Easy-to-use - Just incubate the membrane in the stripping buffer for 30-60 mins at room temperature. Hard-to-remove antibodies are efficiently stripped by incubation in heated buffer. After washing in PBST or TBST, the membrane may be blocked and probed again..

- Fast, simple and highly effcient
- Gentle
- Without ß-mercaptoethanol or DTT
- Suitable for nitrocellulose and PVDF membranes

Cat.No.	Size
42599.01	250 ml
42599.02	1 L

BlueMarine™ 100

HS 90272000

Gel format 7 x 10 cm for quick analysis of up to 28 samples. Contains main unit, 1 removable UV transparent gel tray (7 x 10 cm), 2 gel casting gates, 1 comb (1.0 mm, 8 samples).

Operational Data

Maximum operating voltage:	300 V
Maximum operating current:	200 mA
Approx. gel volume (5 mm gel):	35 ml
Possible comb positions:	2
Maximum of loadable samples:	28
Electrode separation:	18 cm
Recommended volts per cm:	14 - 140

BlueMarine™ is a trademark of SERVA.

Cat.No.	Size
BM-100	1 piece

BlueMarine™ 200

HS 90272000

Gel formats 15 x 15 cm or 15 x 20 cm for best resolution or high throughput analysis. Contains main unit, 1 removable UV transparent gel tray (15 x 20 cm), 1 removable UV transparent gel tray (15 x 15 cm), 2 gel casting gates, 2 combs (1.0 mm, 16 samples).

Operational Data (Tray: 15 x 15 cm / 15 x 20 cm):

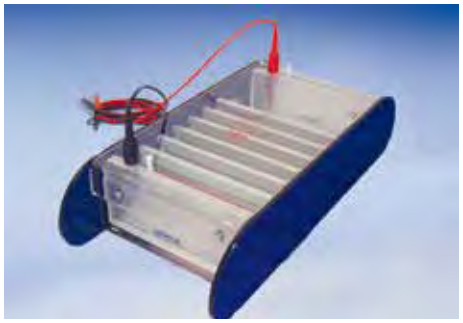
Maximum operating voltage:	500 V / 500 V
Maximum operating current:	300 mA / 300 mA
Approx. gel volume (5 mm gel):	115 ml / 150 ml
Possible comb positions:	2 / 4
Maximum of loadable samples:	62 / 124
Electrode separation:	28.5 cm / 28.5 cm
Recommended volts per cm:	20 - 200 / 20 - 200

Cat.No.	Size
BM-200	1 piece

BlueMarine™ HTS

HS 90272000

Gel format 17.5 cm x 19.2 cm for high resolution long runs of single samples or analysis of complete 96-well microtiter plates. By changing the left/right orientation of the comb you can position the sample wells one upon the other or shifted to each other.
Contains main unit, 1 removable UV transparent gel tray, 6 aluminum combs with 17 sample wells.



Operational Data:

Maximum operating voltage:	500 V
Maximum operating current:	300 mA
Approx. gel volume (5 mm gel):	160 ml
Possible comb positions:	6
Maximum of loadable samples:	102
Electrode separation:	28.5 cm
Recommended volts per cm:	20 - 200 V
Dimensions (W x L x H):	19.5 x 38 x 80 cm

Cat.No.	Size
BM-HTS	1 piece

BlueMarine™ HTS Casting Adaptor

HS 90272000

Casting stand to hand cast agarose gels for BlueMarine™ HTS electrophoresis chamber (cat. no. BM-HTS).

Cat.No.	Size
BM-HTS-CA	1 piece

BlueMarine™ HTS Replacement Tray

HS 90272000

Replacement tray for BlueMarine™ HTS .

Cat.No.	Size
BM-HTS-RT	1 piece

BluePower™ 300 BLOT Power Supply

HS 90272000

The BluePower™ 300 BLOT Power Supply (300 V, 2 A, 300 W) is suited for applications requiring high current like tank blotting or semi-dry blotting of larger protein gels. It is also compatible with separation of nucleic acids. 4 x 2 outlets, programmable.
All SERVA BluePower™ power supplies are easy-to-use, safe and reliable. They are fully overload-protected including short-circuit of outputs: an automatic power-off function stops the voltage when ground leakage is detected.

- Automatic cross-over function with constant voltage, current and power
- Programmable power supplies (9 x 9 steps)
- Free data logging, transfer and remote control via USB
- Timer function (h/Vh)
- Voltage ramp mode

Cat.No.	Size
BP-300-BLO	1 piece

BluePower™ 3000 HPE™ Power Supply

HS 90272000

The BluePower™ 3000 HPE™ Power Supply (3000 V, 200 mA, 300 W) is designed for high voltage applications like isoelectric focusing, horizontal 2D electrophoresis. It comes with a special mode for low current applications such as IEF: the power supply can measure currents as low as 10 microAmps and keep its voltage constant at even 0 current. Other applications like SDS PAGE and submarine electrophoresis can be performed as well. 4 x 2 outlets, programmable.
All SERVA BluePower™ power supplies are easy-to-use, safe and reliable. They are fully overload-protected including short-circuit of outputs: an automatic power-off function stops the voltage when ground leakage is detected.

- Automatic cross-over function with constant voltage, current and power
- Programmable power supplies (9 x 9 steps)
- Free data logging, transfer and remote control via USB
- Timer function (h/Vh)
- Voltage ramp mode.

Cat.No.	Size
BP-3000-HPE	1 piece

BluePower™ 400 MARINE Power Supply

HS 90272000

The BluePower™ 400 MARINE Power Supply (400 V, 500 mA, 50 W) serves many applications like submarine electrophoresis of nucleic acid agarose gels and SDS PAGE in mini gel format. 4 x 2 outlets, programmable.
All SERVA BluePower™ power supplies are easy-to-use, safe and reliable. They are fully overload-protected including short-circuit of outputs: an automatic power-off function stops the voltage when ground leakage is detected.

- Automatic cross-over function with constant voltage, current and power
- Programmable power supplies (9 x 9 steps)
- Free data logging, transfer and remote control via USB
- Timer function (h/Vh)
- Voltage ramp mode.

Cat.No.	Size
BP-400-MAR	1 piece

BluePower™ 600 PRiME™ Power Supply

HS 90272000

The BluePower™ 600 PRiME™ Power Supply (600 V, 1000 mA, 300 W) is an allround instrument serving many applications, e.g. SDS PAGE, blotting and submarine electrophoresis. It is particularly advised for operation of up to four vertical slab gel units run at high voltage, also resulting in shorter running times and for blotting applications (tank blot, semi-dry blot). 4 x 2 outlets, programmable.

All SERVA BluePower™ power supplies are easy-to-use, safe and reliable. They are fully overload-protected including short-circuit of outputs: an automatic power-off function stops the voltage when ground leakage is detected.

- Automatic cross-over function with constant voltage, current and power
- Programmable power supplies (9 x 9 steps)
- Free data logging, transfer and remote control via USB
- Timer function (h/Vh)
- Voltage ramp mode.

Cat.No.	Size
BP-600-PRI	1 piece

BluePower™ 6000 IPG Power Supply

HS 90272000

The BluePower™ 6000 IPG Power Supply (6000 V, 150 mA, 300 W) is designed for high voltage applications like isoelectric focusing in IPG strips. It comes with a special mode for low current applications such as IEF: the power supply can measure currents as low as 10 microAmps and keep its voltage constant at even 0 current. Other applications like SDS PAGE and submarine electrophoresis can be performed as well. 4 x 2 outlets, programmable.
All SERVA BluePower™ power supplies are easy-to-use, safe and reliable. They are fully overload-protected including short-circuit of outputs: an automatic power-off function stops the voltage when ground leakage is detected.

- Automatic cross-over function with constant voltage, current and power
- Programmable power supplies (9 x 9 steps)
- Free data logging, transfer and remote control via USB
- Timer function (h/Vh)
- Voltage ramp mode.

Cat.No.	Size
BP-6000-IPG	1 piece

BlueSlick™

DANGER
H225-H319-H336 ♦ MAK/TRK 500 mg/m³; 200 ml/m³ for isopropanol ♦ GGVSE/ADR 3 II UN1993 ♦ IATA 3 II UN1993 ♦ WGK 1 ♦ HS 38220000

Non-toxic BlueSlick™ is the alternative to silane-containing products and is non-irritant to eyes. It can be handled outside of a fume-hood. Suitable to all applications in electrophoresis (DNA sequencing, SDS PAGE, IEF PAGE). It does not affect the separation. Supplied in a safety spray bottle made from PE, free of propellant (CFC). One spray dose dispenses a quantity of 0.7 ml BlueSlick™ reagent. BlueSlick™ coating will last for 3 to 4 electrophoresis applications.
Ready-to-use reagent for treatment of glass plates; non-toxic, prevents adhesion of gels to glass.

BlueSlick is a trademark of SERVA.

Cat.No.	Size
42500.01	250 ml

BlueVertical™ PRiME™ Mini Slab Gel Unit

HS 90272000

The BlueVertical™ PRiME™ is a dual mini tank system to operate one or two precast gels. It accomodates SERVA*Gel*™ TG PRiME™, all other types of SERVA*Gel*™ and all other commercially available precast gels with an outer cassette dimension of 10 x 10 x 0.7 cm. The fixture of the inner core unit has been re-engineered to provide four robust clamps (two on both sides) that fix two precast gel cassettes properly and tightly in their correct position. This ensures that the inner buffer chamber is leak-free separated from the outer buffer compartment.
Separation of proteins by SDS PAGE, native PAGE and IEF can be carried out as well as separation of nucleic acids. The outer buffer tank works as heat sink (passive cooling by buffer), sufficient for most applications mentioned above. You may run two SERVA*Gel*™ TG PRiME™ simultaneously at 300 Volt. The run will be completed in about 35 minutes without warming up the buffer significantly. If additional cooling is required (e. g. for IEF applications), a magnetic stirrer can be applied to help circulation of buffer fluid.
The unit consists of an outer buffer tank and the inner core running unit. Mounting of precast gels does not require any tedious clamping but is a matter of seconds. The outer buffer tank is made from rugged transparent acrylic – watch your gel while running! A safety lid closes the top, giving the unit a very compact and robust design. Little bench space is required. The unit is, of course, in accordance with the European safety guidelines (CE mark). When quality becomes an issue – choose BlueVertical™ PRiME™.

Specifications:

Inner buffer volume	200 ml
Outer buffer volume	450 ml
Voltage (max)	500 Volt
Current (max)	250 mA
Operating temperature	4 °C - 65 °C
Electrodes	Rod electrode, platinum-coated
Dimensions	16 x 15.6 x 9.5 cm (WxHxD)
Weight	1.2 kg

Cat.No.	Size
BV-104	1 piece

BlueVertical PRiME™ Blot Module

HS 90272000

Tank blotting module to blot two gels directly in your BlueVertical™ PRiME™ chamber (BV104). Easy handling without clamps. No frail hinges.

Cat.No.	Size
BV-104-B.01	1 piece

BlueVertical PRiME™ Casting Stand

HS 90272000

The BlueVertical PRiME™ Casting Stand is a casting system to cast one or two vertical mini gels to be operated with the BlueVertical PRiME™ electrophoresis chamber (BV-104). It consists of a casting base with a rubber seal and a core unit to hold the glass plate sandwich in position. 1.0 mm spacers, combs and glass plates (plain, notched) have to be ordered separately.

Ordering information for casting accessories:
BV-10-1.0: Comb, 1.0 mm, 10 wells
BV-12-1.0: Comb, 1.0 mm, 12 wells
BV-15-1.0; Comb, 1.0 mm, 15 wells
BV-10-1.5: Comb, 1.5 mm, 10 wells
BV-12-1.5: Comb, 1.5 mm, 12 wells
BV-15-1.5; Comb, 1.5 mm, 15 wells
BV-GP-P1.0: Glass plates with spacers (1.0 mm), plain (4), 3.0 mm glass
BV-GP-P1.5: Glass plates with spacers (1.5 mm), plain (4), 3.0 mm glass
BV-GP-N: Glass plates notched (4), 3.0 mm glass

Cat.No.	Size
BV-104-CS	1 piece

BlueZol Lysis reagent for cells and tissues

DANGER
H300-H311-H314-H317
Muta.2 ♦ GGVSE/ADR: 6.1 III UN2821 ♦ IATA: 6.1 III UN2821 ♦ WGK: 2

HS 38220000
Storage temperature +2 °C to +8 °C

BlueZol is a ready-to-use reagent for the isolation of total RNA from various biological materials such as animal and plant tissues, cell culture and bacterial cells.
Homogenisation or lysis of a biological sample in BlueZol leads to a separation into three phases: an aqueous upper phase, an organic lower phase and an interphase. The RNA remains in the aqueous phase and its purification is followed by precipitation in isopropyl alcohol. The highly effective RNase inhibitory property of BlueZol protects the integrity of the RNA during lysis and results in the isolation of high-quality RNA. The purified RNA is ideal for any downstream applications such as RT-PCR, *in vitro* translation, Northern Blotting, RNase protection assays or dot blot hybridization.
BlueZol can be used for the simultaneous isolation of RNA, DNA and protein from one sample. The DNA remains in the interphase and the proteins in the organic phase. After purification DNA can be used for PCR and Southern Blotting and the proteins for Western Blotting.

Cat.No.	Size
39808.01	100 ml

Blue LED Table

HS 90275000

Bluelight table for DIAS-III

Cat.No.	Size
BLED-T	1 piece

Boric acid analytical grade

H_3BO_3 ♦ M_r 61.83 ♦ CAS [10043-35-3]

DANGER
H360Fd ♦ Repr. 1B ♦ MAK/TRK 0.5 mg/m³ ♦ EG-Index 005-007-00-2 ♦ EINECS 233-139-2 ♦ WGK 1L ♦ HS 28100090

Ph.Eur. Buffering substance.

Assay (titr.)	99.0 - 100.5 %
Heavy metals (Pb)	max. 15 ppm

Cat.No.	Size
15165.02	250 g
15165.01	1 kg

Boric acid electrophoresis grade

H_3BO_3 ♦ M_r 61.83 ♦ CAS [10043-35-3]

DANGER
H360Df ♦ Repr. 1B ♦ MAK/TRK 0.5 mg/m³ ♦ EG-Index 005-007-00-2 ♦ EINECS 233-139-2 ♦ WGK 1L ♦ HS 28100090

Boric acid is used to prepare TBE buffer, the most frequently used buffer for DNA/RNA electrophoresis (1). Application tested quality for electrophoresis.

Assay (titr.)	99.0 - 100.5 %
Heavy metals (Pb)	max. 15 ppm

References:
1. Ogden, R. C. & Adams, D. A. (1987) Methods Enzymol. ***152,*** 61 - 87

Cat.No.	Size
15166.02	1 kg

Bradford Reagent, 5x concentrate

DANGER
H314 ♦ GGVSE/ADR 3 II UN2924 ♦ IATA 3 II UN2924 ♦ WGK 1 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Protein dye reagent for protein quantification after Bradford (1).

- Precise, reproducible and inexpensive
- Fast, only five minutes incubation before reading the sample at 595 nm
- Suitable for micro (1 - 25 µg protein/ml) and standard (100 – 1000 µg protein/ml) assays

50 ml Bradford reagent are sufficient for more than 200 micro assays (1-ml cuvette) or for more than 900 assays in micro titer plates.

References:
1. Bradford, M. M. (1976) Anal. Biochem., ***72***, 248 – 254

Cat.No.	Size
39222.01	50 ml
39222.02	200 ml
39222.03	500 ml

Brij 35™ pract.

(Polyoxyethylene monolauryl ether)
M_r ca. 1200 ♦ CAS [9002-92-0]

EINECS 500-002-6 ♦ WGK 2L ♦ HS 34021300

n ca. 23. HLB 16.9. Suitable for the isolation of functional membrane complexes (1). Also applied in chemiluminescence analysis (2, 3).

Brij = registered trademark of the CRODA International Plc.

References:
1. Yoshikawa, S. et al. (1988) Proc. Natl. Acad. Sci. USA ***85,*** 1354-8
2. Javier, B.F. et al. (1988) J. Biolumin. Chemilumin. ***2,*** 121-8
3. Aiken, J.H. & Huie, C.W. (1991) Anal. Lett. ***24,*** 167-80

Cat.No.	Size
15230.01	100 g

Bromelain from pineapple stem min. 0.2 DMC-U/mg powder

(Stem bromelain)
EC 3.4.22.32 ♦ M_r ca. 33 000 ♦ CAS [37189-34-7]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-005-00-X ♦ EINECS 253-387-5 ♦ WGK 3L ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Suitable for blood group serology (1) and degradation of proteins.

Unit definition: 1 DMC-U catalyzes the cleavage of 1 µmole peptide bond from dimethyl casein per minute at 25 °C, pH 7.0 expressed in terms of newly formed terminal amino groups (determined with TNBS) (2).

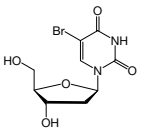
Activity in other units: 1200 GDU units/g (1 GDU unit yields the equivalent of 1 mg amino nitrogen from gelatin in 20 min at 45 °C, pH 4.5).
2400 FIP units/g (4).

References:
1. Gray, M.P. (1959) J. Lab. Clin. Med. ***54,*** 155-7
2. Lin, Y. et al. (1969) J. Biol. Chem. ***244,*** 789-93
3. Murach, T. (1976) Methods Enzymol. Vol. ***45,*** Acad. Press, New York, p. 475-85
4. Monod, J. (1966) Pharm. ***4***, 343 (FIP-Method)

Cat.No.	Size
15250.01	25 g
15250.02	100 g
15250.03	500 g

5-Bromo-2'-deoxyuridine research grade

$C_9H_{11}BrN_2O_5$ ♦ M_r 307.1 ♦ CAS [59-14-3]



WARNING
H351 ♦ EINECS 200-415-9 ♦ WGK 2 ♦ HS 29349990
Storage temperature +2 °C to +8 °C

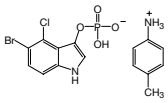
Thymidine analog used as a mutagen in genetic research. Selectively incorporated into cellular DNA during S-phase. It is used to measure DNA synthesis and to label dividing cells for the study of cell signaling and other processes that induce cell proliferation.

Purity (HPLC) min. 99.0 %

Cat.No.	Size
15240.02	1 g

5-Bromo-4-chloro-3-indolyl-phosphate·p-toluidine-salt research grade

(BCIPT)
$C_8H_6NO_4BrClP{\cdot}C_7H_9N$ or $C_{15}H_{15}BrClN_2O_4P$ ♦ M_r 433.6 ♦ CAS [6578-06-9]



EINECS 229-506-1 ♦ HS 29339980
Storage temperature -15 °C to -25 °C

Used in conjunction with NBT (cat. no. 30550) for detection of alkaline phosphatase.
Stock solution: 50 mg/ml in 100 % DMF. Store at 4 °C or -20 °C.
Staining solution for western blots: 66 µl NBT stock solution and 33 µl BCIP stock solution in 10 ml staining buffer (100 mM NaCl, 5 mM $MgCl_2$, 100 mM Tris; pH 9.5).

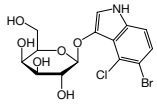
Assay (HPLC) min. 99.0 %

References:
1. Wolf, P.L. et al. (1973) Clin. Chem. ***19,*** 1248-9

Cat.No.	Size
15247.03	500 mg

5-Bromo-4-chloro-3-indolyl-β-D-galactoside (X-Gal) research grade

(X-Gal)
$C_{14}H_{15}BrClNO_6$ ♦ M_r 408.6 ♦ CAS [7240-90-6]



EINECS 230-640-8 ♦ WGK 1 ♦ HS 29389090
Storage temperature +2 °C to +8 °C

X-Gal is a well known histochemical substrate used to detect the β-galactosidase enzyme (1, 2, 3, 4, 9, 10). Identification of lac$^-$-colonies (8). X-gal is used to distinguish recombinant plasmids from parental vectors in cloning experiments using vectors containing the lacZ or lacZ [DMvP1](-)peptide gene (2, 3, 5). Upon hydrolysis, X-Gal yields a localized, insoluble blue precipitate making it exceptionally useful in blotting, immunocytochemical, and ELISA assays. X-Gal has been used for the detection of coliforms (*E. coli*) in municipal water supplies (6) and food products (7). X-Gal is often used in conjunction with IPTG (Isopropyl-β-D-thiogalactopyranoside, cat. no. 26600) which binds and inhibits the lac repressor thus inducing β-galactosidase activity.

Stock solution: 20 mg/ml in DMF. Store in aliquots at -20 °C in the dark. For detection of transformants, use in final concentration of 40 µg/ml.

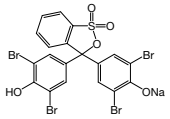
Assay (HPLC) min. 99.0 %

References:
1. Maloy, S.R. (1990) Experimental Techniques in Bacterial Genetics, Jones and Bartlett (eds.), Boston, MA
2. Miller, J.H.(1992) A Short Course in Bacterial Genetic, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.
3. Sambrook, J. et al. (1989) Molecular Cloning: A Laboratory Manual, 2nd. ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor (4.8, 4.22-4.23, 4.33, 4.37-4.38, 1.85-1.86, B.14)
4. Horowitz, J. et al. (1964) J. Med. Chem. ***7,*** 574
5. Brand, A. and Perrimon, N. (1993), Development ***118,*** 401
6. Ley, A. et al. (1993) Can. J. Microbio. ***39,*** 821
7. Feldsine, P.T. et al. (1993) J. AOAC Int. ***76,*** 5
8. Lojda, Z. et al. (1973) Histochemie ***34,*** 31-9
9. Lojda, Z. et al. (1979) in »Enzyme Histochemistry, A Laboratory Manual«, Springer-Verlag Berlin, Heidelberg, New York
10. Davies et al. (1980) Advanced Bacterial Genetics, Cold Spring Harbor, N.Y.

Cat.No.	Size
15243.06	250 mg
15243.03	1 g

Bromophenol Blue·Na-salt

(3'-3"-5'-5"-Tetrabromophenol sulfonphthalein)
$C_{19}H_9Br_4O_5S{\cdot}Na$ ♦ M_r 692.0 ♦ CAS [34725-61-6]



EINECS 252-170-2 ♦ WGK 2L ♦ HS 32049000

Tracking dye for electrophoresis; indicator pH 3.4 (yellow) - 4.6 (purple).

λ max. (0.001 % in water) 594 ± 4 nm

Cat.No.	Size
15375.01	5 g
15375.02	25 g

BSA

see 11920 Albumin Bovine, page 7

Buffer Kit for 2DGel DALT*six*

HS 38220000

0.5 L anodal buffer (10X), 0.3 L cathodal buffer (5X), 50 ml IPG equilibration buffer, agarose for strip fixation, DALT*six* 1 run.

Cat.No.	Size
43325.01	1 kit

Buffer Kit for 2DGel DALT*twelve*

HS 38220000

1.5 L anodal buffer (10X), 0.6 L cathodal buffer (5X), 100 ml IPG equilibration buffer, agarose for strip fixation, DALT*twelve* 1 run.

Cat.No.	Size
43326.01	1 kit

Buffer Kit for 2D HPE™ Gels

HS 38220000

Anode, cathode and equilibration buffer, cooling contact fluid and electrode wicks for all flatbed gels.

Cat.No.	Size
43312.01	1 kit

Buffer Substance Dulbecco's

(PBS)
HS 38220000

Phosphate buffered saline, **without** calcium and magnesium; **without** phenol red; powder.

References:
1. Dulbecco, R. & Vogt, M. (1954) J. Exp. Med. ***99,*** 17-82
2. Hanks, J.H. & Wallace, R.E. (1949) Proc. Soc. Exp. Biol. Med. ***71,*** 196-200

Cat.No.	Size
47302.02	10 L
47302.03	50 L

n-Butanol analytical grade

(1-Butanol)
$C_4H_{10}O$ ♦ M_r 74.12 ♦ CAS [71-36-3]

DANGER
H226-H302-H315-H318-H335-H336 ♦ EG-Index 603-004-00-6 ♦ GGVSE/ADR 3 III UN1120 ♦ IATA 3 III UN1120 ♦ EINECS 200-751-6 ♦ WGK 1 L ♦ HS 29051300

Can be used for the removal of ethidium bromide from DNA purified by CsCl gradient ultracentrifugation and for the concentration of dilute nucleic acid solutions by repeated extractions.

Assay (GC)	min. 99.0 %
Density (20 °C)	0.810
Water	max. 500 ppm
Acidity	max. 0.001 %
Residue on evaporation	max. 50 ppm

Cat.No.	Size
45628.01	1 L

n-Butanol molecular biology grade

(1-Butanol)
$C_4H_{10}O$ ♦ M_r 74.12 ♦ CAS [71-36-3]

DANGER
H226-H302-H315-H318-H335-H336 ♦ MAK/TRK 310 mg/m³; 100 ml/m³ ♦ EG-Index 603-004-00-6 GGVSE/ADR 3 III UN1120 ♦ IATA 3 III UN1120 ♦ EINECS 200-751-6 ♦ WGK 1L ♦ HS 29051300

n-Butanol is used for the removal of ethidium bromide from DNA purified by CsCl gradient ultracentrifugation. It is also useful for the concentration of diluted nucleic acid solutions by repeated extractions.

Assay min. 99.0 %

References:

1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (1.46, E16)
2. Ed. Ausubel et al., (2000) Current Protocols in Molecular Biology, Wiley & Sons, Inc. (New York, NY), 7.6.5 Suppl.

Cat.No.	Size
39550.01	500 ml

C7BzO

see 20759 ASB-C7BzO, page 15

Cacodylic acid·Na-salt·3H$_2$O research grade

(Sodium cacodylate)
$C_2H_6AsO_2 \cdot Na \cdot 3H_2O$ ♦ M_r 214.0 ♦ CAS [6131-99-3]

DANGER
H301-H331-H410 ♦ EG-Index 033-002-00-5 ♦ GGVSE/ADR 6.1 II UN1688 ♦ IATA 6.1 II UN1688 ♦ EINECS 204-708-2 ♦ WGK 3 ♦ HS 29319080

For buffers, especially for bactericidal buffers used in electron microscopy.

Assay (titr.) min. 98.0 %

Cat.No.	Size
15540.01	25 g
15540.02	100 g
15540.03	500 g

Calcium chloride pure, anhydrous

$CaCl_2$ ♦ M_r 110.99 ♦ CAS [10043-52-4]

WARNING
H319 ♦ EG-Index 017-013-00-2 ♦ EINECS 233-140-8 ♦ WGK 1L ♦ HS 28272000

Economical drying agent for drying processes in laboratories like drying of liquids, neutral gases and a wide variety of solvents. It is as well a component of insect and plant cell culture media.

Assay (titr.) min. 98.0 %

Cat.No.	Size
15585.02	500 g

Calcium hypochlorite research grade

$Ca(OCl)_2$ ♦ M_r 142.98 ♦ CAS [7778-54-3]

DANGER
H272-H302-H314-H400 ♦ EG-Index 017-012-00-7 ♦ GGVSE/ADR 5.1 II UN1748 ♦ IATA 5.1 II UN1748 ♦ EINECS 231-908-7 ♦ WGK 2 ♦ HS 28281000

Disinfectant, oxidant and chlorinating agent.

MP	100 °C
d20 °C	2.350
Active chlorine	min. 65.0 %

Cat.No.	Size
15591.02	500 g

Canada balsam for microscopy

CAS [8007-47-4]

EINECS 232-362-2 ♦ WGK 2L ♦ HS 13019000

Non-aqueous mounting medium for preparation of permanent slides for light microscopy. It is produced from the resin of the balsam fir tree.

Density (20 °C)	0.97 - 1.0
Refractive index (20 °C)	1.520 - 1.525

Cat.No.	Size
26896.02	100 ml

CAPS analytical grade

(Cyclohexylamino propanesulphonic acid)
CAS [1135-40-6]

EINECS 214-492-1 ♦ HS 29213099

pKa 20 = 10.4. Buffering substance (1).

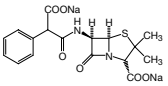
Assay (titr.)	min. 99.0 %
A 1 cm/1 M in water	
260 nm	max. 0.05
280 nm	max. 0.1
Loss on drying	max. 1.0 %

References:

1. Good, N.E. & Izawa, S. (1972) Methods Enzymol. ***24***, 53-68

Cat.No.	Size
15111.02	100 g
15111.03	250 g

Carbenicillin·Na$_2$-salt research grade



(α-Carboxybenzylpenicillin·disodium salt)
$C_{17}H_{16}N_2O_6S \cdot Na_2$ ♦ M_r 422.37 ♦ CAS [4800-94-6]

DANGER
H317-H334 ♦ EINECS 225-360-8 ♦ WGK 1 ♦ HS 29411000
Storage temperature +2 °C to +8 °C

Semisynthetic derivative of benzylpenicillin G. Inhibitor of bacterial cell wall synthesis. Active above all against gram negative bacteria, less against gram positive. Used in molecular biology for selection of resistant strains (2). In plant cell culture often in combination with streptomycin or nystatin to prevent bacterial contamination (3,4). Effect on somatic embryo genesis (5).

References:

1. Butler et al. (1970) J. Infec. Dis. ***122,*** Suppl. 81
2. Sambrook, J. et al. (2001) A Laboratory Manual, 3rd ed., Cold Spring Harbor, NY
3. Horsch, R.B. a. King, J. (1983) Plant Cell Tiss. Organ Cult. ***2***, 21-8
4. Watts, J.W. a. King, J.M. (1973) Planta ***113***, 271-7
5. Sarma, K.S. Et al. (1995) . J. Exp. Bot. ***46***, 1779-81

Cat.No.	Size
15875.03	5 g

Carbonic anhydrase from bovine erythrocytes ca. 1.5 U/mg lyophil.

(Carbonate dehydratase; Carbonate hydrolyase)
EC 4.2.1.1. ♦ M_r ca. 29 000 ♦ CAS [9001-03-0]

DANGER
H334 ♦ EINECS 232-576-6 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Homogeneous in SDS-PAGE. Contains carbonic anhydrases A and B; both forms have similar high specific activities and therefore belong to the C-group of mammalian carbonic anhydrases (1).

Unit definition: 1 U catalyzes the hydrolysis of 1 µmole 4-nitrophenyl acetate per minute at 25 °C, pH 7.6 (2).

Activity in other units: ca. 4000 Wilbur-Anderson units/mg (3).

References:

1. Lindskog, S. et al. (1971) The Enzymes (Boyer, P.D., ed.) ***5,*** 587-665
2. Armstrong, J. McD. et al. (1966) J. Biol. Chem. ***241,*** 5137-49
3. Wilbur, K.M. & Anderson, N.G. (1948) J. Biol. Chem. ***176,*** 147-54

Cat.No.	Size
15882.01	25 mg
15882.02	100 mg

Carbopol® 934 pract.

WGK 1L ♦ HS 39069090

A carboxyvinyl-polymer with a very high molecular weight. The powder supplied as the free acid is soluble in water up to 5 % and forms a solution of fairly low viscosity with pH ca. 3. Upon neutralization with sodium hydroxide a highly viscous gel is formed, even at a concentration of only 0.1 %. Tackifier, emulsion and suspension stabilizer. White, hygroscopic powder, physiologically harmless.

Carbopol = registered trademark of B.F. Goodrich Chemical Co.

Cat.No.	Size
15885.01	100 g
15885.02	500 g

α-Carboxybenzylpenicillin·disodium salt

see 15875 Carbenicillin·Na_2-salt, page 24

Carmine research grade

(Natural Red 4; Aluminum calcium lake of the cochineal dye)
C.I.75470 ♦ CAS [1390-65-4]

EINECS 215-724-4 ♦ WGK 1L ♦ HS 32030010

For application in Orth's lithium carmine staining and Schneider's acetocarmine staining.

Cat.No.	Size
16180.02	25 g

Carrier Ampholytes

see 42902 SERVALYT™ 2-4, page 130

Casting gates for BlueMarine™ 100

HS 90271090

Gel width 7 cm.

Cat.No.	Size
BM-100-3	2 pieces

Casting gates for BlueMarine™ 200

HS 90279050

Gel width 15 cm.

Cat.No.	Size
BM-200-3	2 pieces

Catalase from *Aspergillus niger* ca. 1800 U/mg lyophil. salt-free

EC 1.11.1.6 ♦ M_r ca. 240 000 ♦ CAS [9001-05-2]

DANGER
H334 ♦ EINECS 232-577-1 ♦ WGK 1L ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Catalase is used for the removal of peroxides, the generation of oxygen and, in coupled systems, for the determination of metabolites e.g. uric acid (1). A very stable preparation particularly suitable for immobilization.

Unit definition: 1 U catalyzes the cleavage of 1 µmole hydrogen peroxide per minute to water and oxygen at 25 °C, pH 7. The decrease in hydrogen peroxide concentration can be followed spectrophotometrically at 240 nm (1).

References:
1. Bartl, K. & Ziegenhorn, J. (1985) Methods of Enzymatic Analysis (Bergmeyer, H.U., ed.) 3rd Ed. Vol. ***7,*** p. 134-46
2. Aebi, H.E. (1983) Methods of Enzymatic Analysis (Bergmeyer, H.U., ed.) 3rd Ed. Vol. ***3,*** p. 277-86

Cat.No.	Size
26905.01	100 mg

Catalase from bovine liver ca. 11 000 U/mg lyophil. salt-free

EC 1.11.1.6 ♦ M_r ca. 240 000 ♦ CAS [9001-05-2]

DANGER
H334 ♦ EINECS 232-577-1 ♦ WGK 1L ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Homogeneous in SDS-PAGE. Ca. 40 000 U/mg protein.

Unit definition: 1 U catalyzes the cleavage of 1 µmole hydrogen peroxide per minute to water and oxygen at 25 °C, pH 7.0. The decrease in hydrogen peroxide concentration can be followed spectrophotometrically at 240 nm (1).

References:
1. Bergmeyer, H.U. (1983) Methods of Enzymatic Analysis (Bergmeyer, H.U., ed) 3rd Ed. Vol. ***2***, p. 165-6

Cat.No.	Size
26910.01	250 mg
26910.02	1 g

Cathode Fluid 10 for IEF


DANGER
H314-H317-H334 ♦ GGVSE/ADR 8 III UN3267 ♦ IATA 8 III UN3267 ♦ WGK 2 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Contains 0.22 g L-arginine base, 0.18 g L-lysine base, 6.0 ml ethylene diamine in 50 ml water. Recommended for general use with SERVALYT™ PRECOTES™.

Cat.No.	Size
42986.03	50 ml

Celite™ 545 pract.

CAS [68855-54-9]

WARNING
H373 ♦ EINECS 272-489-0 ♦ WGK - ♦ HS 38029000

Purified and calcined, average particle size 0.02 - 0.08 mm.

Celite = registered trademark of Manville Corp.

Cat.No.	Size
16391.02	2 kg

Cellulase »Onozuka« R-10 from *Trichoderma viride* ca. 1 U/mg

CAS [9012-54-8]

DANGER
H334 ♦ EG-Index 647-002-00-3 ♦ EINECS 232-734-4 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

A multi-component enzyme system (1). Although the preparation has high cellulase activity, it still contains hemicellulases, and it degrades mannans, xylans, galactomannans, pectins and other polysaccharides. Widely used for the isolation of protoplasts, for its ability to degrade cell walls, often in combination with Macerozyme R-10 (cat. no. 28302) (2).

Temperature optimum: 40 - 50 °C
pH-optimum: pH 4 - 5

Unit definition: 1 U catalyzes the liberation of 1 µmole glucose from sodium carboxymethyl cellulose per minute at 40 °C, pH 4.5; glucose determined with alkaline copper reagent (3).

Extraneous activities: α-amylase ca. 0.8 U, pectinase ca. 0.4 U, protease ca. 0.01 DMC-U, hemicellulase ca. 1 U/mg (1 U catalyzes the liberation of 1 µmole reducing groups from xylan per hour at 37 °C, pH 5.5, calculated as xylose).

References:
1. Beldman, G. et al. (1985) Eur. J. Biochem. ***146,*** 301-8
2. Potrykus, J. & Shillito, R.D. (1986) Methods Enzymol. ***118,*** 549-78
3. Okada, G. (1988) Methods Enzymol. Vol. ***160,*** 259-63
4. Lendl & Bauer (1989) Zell- und Gewebekultur, Gustav Fischer Verlag, 147ff.

Cat.No.	Size
16419.02	2,5 g
16419.03	10 g
16419.05	50 g

Cellulase »Onozuka« RS from *Trichoderma viride* ca. 2 U/mg

CAS [9012-54-8]

DANGER
H334 ♦ EG-Index 647-002-00-3 ♦ EINECS 232-734-4 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

A multi-component enzyme system (1). Although the preparation has high cellulase activity (EC 3.2.1.4), it still contains hemicellulases, and it degrades mannans, xylans, galactomannans, pectins and other polysaccharides. Contains about three times as high xylanase activity as Cellulase Onozuka R-10 (cat. no. 16419). Widely used for the isolation of protoplasts, for its ability to degrade cell walls, often in combination with Macerozyme R-10 (cat. no. 28302) (2).

Temperature optimum: 50 - 60 °C
pH-optimum: pH 4 - 5

Unit definition: 1 U catalyzes the liberation of 1 µmole glucose from sodium carboxymethyl cellulose per minute at 40 °C, pH 4.5; glucose determined with alkaline copper reagent (3).

Extraneous activities: Contains α-amylase, pectinase, protease and hemicellulase.

References:
1. Beldman, G. et al. (1985) Eur. J. Biochem. ***146,*** 301-8
2. Potrykus, J. & Shillito, R.D. (1986) Methods Enzymol. ***118,*** 549-78
3. Okada, G. (1988) Methods Enzymol. Vol. ***160,*** 259-63
4. Lendl & Bauer (1989) Zell- und Gewebekultur, Gustav Fischer Verlag, 147ff.

Cat.No.	Size
16420.01	1 g
16420.02	5 g

Cellulose microcrystalline ca. 0.02 mm research grade

(Avicel PH 105®; previously Avicel TG 104; Avicel SF)
CAS [9004-34-6]

EINECS 232-674-9 ♦ WGK - ♦ HS 39129090

Suitable for TLC, no binder required.

Avicel = registered trademark of FMC, Brussels.

Cat.No.	Size
14205.02	1 kg

Cellulose microcrystalline ca. 0.05 mm research grade, Ph. Eur., USP/NF

(Avicel PH 101®; previously Avicel TG 101; Avicel PH)
CAS [9004-34-6]

EINECS 232-674-9 ♦ HS 39129090

Avicel = registered trademark of FMC, Brussels.

Cat.No.	Size
14204.02	1 kg

CentriPure MINI Spin Columns Desalt Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into pure, deionized water.
(Caution! Some proteins may precipitate in pure water with low ionic strength!)
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42130.01	4 columns

CentriPure MINI Spin Columns Desalt Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into pure, deionized water.
(Caution! Some proteins may precipitate in pure water with low ionic strength!)
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42131.01	25 columns

CentriPure MINI Spin Columns Desalt Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into pure, deionized water.
(*Caution! Some proteins may precipitate in pure water with low ionic strength!*)
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42132.01	100 columns

CentriPure MINI Spin Columns Desalt Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 25 kD with minimal dilution. Purified proteins are eluted into pure, deionized water.
(Caution! Some proteins may precipitate in pure water with low ionic strength!)
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl

Cat.No.	Size
42113.01	4 columns

CentriPure MINI Spin Columns Desalt Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into pure, deionized water.
(Caution! Some proteins may precipitate in pure water with low ionic strength!)
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl

Cat.No.	Size
42114.01	25 columns

CentriPure MINI Spin Columns Desalt Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into pure, deionized water.
(Caution! Some proteins may precipitate in pure water with low ionic strength!)
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42115.01	100 columns

CentriPure MINI Spin Columns PBS Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into Phosphate Buffered Saline (PBS, pH 7).
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42136.01	4 columns

CentriPure MINI Spin Columns PBS Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into Phosphate Buffered Saline (PBS, pH 7).
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42137.01	25 columns

CentriPure MINI Spin Columns PBS Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into Phosphate Buffered Saline (PBS, pH 7).
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42138.01	100 columns

CentriPure MINI Spin Columns PBS Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into Phosphate Buffered Saline (PBS, pH 7).
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42127.01	4 columns

CentriPure MINI Columns PBS Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient desalting, buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into Phosphate Buffered Saline (PBS, pH 7).
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42128.01	25 columns

CentriPure MINI Spin Columns PBS Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into Phosphate Buffered Saline (PBS, pH 7).
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42129.01	100 columns

CentriPure MINI Spin Columns TRIS Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into 1 mM TRIS, pH 6.
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42133.01	4 columns

CentriPure MINI Spin Columns TRIS Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into 1 mM TRIS, pH 6.
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42134.01	25 columns

CentriPure MINI Spin Columns TRIS Z-25

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 5 kDa with minimal dilution. Purified proteins are eluted into 1 mM TRIS, pH 6.
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42135.01	100 columns

CentriPure MINI Spin Columns TRIS Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into 1 mM TRIS, pH 6.
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42124.01	4 columns

CentriPure MINI Spin Columns TRIS Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into 1 mM TRIS, pH 6.
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42125.01	25 columns

CentriPure MINI Spin Columns TRIS Z-50

HS 38220000
Storage temperature +2 °C to +8 °C

Quick and efficient buffer exchange, removal of dyes and small molecules from proteins greater than 25 kDa with minimal dilution. Purified proteins are eluted into 1 mM TRIS, pH 6.
The gel bed has a volume of 0.8 ml. Samples with a volume of between 10 and 100 µl can be processed. Optimal purification and recovery is obtained with a sample volume of 50 µl.

Cat.No.	Size
42126.01	100 columns

CentriPure P2 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 200 µl can be purified with an elution volume of 200 to 350 µl.

Cat.No.	Size
42100.01	2 columns

CentriPure P2 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 200 µl can be purified with an elution volume of 200 to 350 µl.

Cat.No.	Size
42101.01	50 columns

CentriPure P5 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 0.5 ml can be purified with an elution volume of 1 ml.

Cat.No.	Size
42102.01	2 columns

CentriPure P5 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 0.5 ml can be purified with an elution volume of 1 ml.

Cat.No.	Size
42103.01	50 columns

CentriPure P10 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 1 ml can be purified with an elution volume of 1.2 to 1.5 ml.

Cat.No.	Size
42104.01	2 columns

CentriPure P10 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 1 ml can be purified with an elution volume of 1.2 to 1.5 ml.

Cat.No.	Size
42105.01	50 columns

CentriPure P25 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 2.5 ml can be purified with an elution volume of 2.7 to 3.5 ml.

Cat.No.	Size
42106.01	2 columns

CentriPure P25 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 2.5 ml can be purified with an elution volume of 2.7 to 3.5 ml.

Cat.No.	Size
42107.01	25 columns

CentriPure P50 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 5 ml can be purified with an elution volume of 6 to 8 ml.

Cat.No.	Size
42108.01	1 column

CentriPure P50 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 5 ml can be purified with an elution volume of 6 to 8 ml.

Cat.No.	Size
42109.01	10 columns

CentriPure P100 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 10 ml can be purified with an elution volume of 12 to 15 ml.

Cat.No.	Size
42110.01	1 column

CentriPure P100 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 10 ml can be purified with an elution volume of 12 to 15 ml.

Cat.No.	Size
42111.01	10 columns

CentriPure P500 Columns

HS 38220000
Storage temperature +2 °C to +8 °C

Rapid and efficient removal of small molecules (salts, dyes, ammonia, haptens, biotin, etc.) from antibodies, enzymes and other proteins. Molecules purified with Zetadex-25 are separated according to size. Proteins larger than 10 kDa in a sample volume of up to 50 ml can be purified with an elution volume of 65 to 70 ml.

Cat.No.	Size
42112.01	1 column

Cerulenin from *Cephalosporium caerulens* research grade

$C_{12}H_{17}NO_3$ ♦ M_r 223.27 ♦ CAS [17397-89-6]

WARNING
H302-H312-H332 ♦ EINECS 241-424-8 ♦ HS 29419000
Storage temperature -15 °C to -25 °C

Antifungal antibiotic that inhibits sterol and fatty acid biosynthesis. Inhibits HMG-CoA synthetase activity. Induces apoptosis in tumor cell lines. Packaged under argon.
Protect from light!

Assay (TLC) min. 98.0 %

References:

1. Omura, S. (1976) Bacteriol. Rev. ***40***, 681-697
2. Buttke, T.M. & Ingram, L.O. (1978) Biochemistry ***17***, 5282-6
3. Omura, S. (1981) Meth. Enzymol. ***72***, 520-32
4. Pizer, E.S. et al. (1996) Cancer Res. ***56***, 2745-7
5. Fuuya, Y et al. (1997) Anticancer Res. ***17***, 4589-93

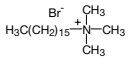
Cat.No.	Size
16487.01	1 mg

Cetrimide C16

see 16530 Cetyltrimethylammonium·bromide, page 29

Cetyltrimethylammonium·bromide cryst. pure

(CTAB; Cetrimide C16; Cetrimonium bromide; Hexadecyltrimethyl ammonium·bromide; Palmityltrimethyl-ammonium·bromide)



$C_{19}H_{42}N^+Br$ ♦ M_r 364.46 ♦ CAS [57-09-0]

WARNING
H302-H315-H319-H400-H410 ♦ GGVSE/ADR 9 III UN3077 IATA 9 III UN3077 ♦ EINECS 200-311-3 ♦ WGK 3L ♦ HS 29239000

Cationic surfactant used instead of SDS in electrophoresis of highly charged and membrane protein subunits (1). Surfactant for modifying silica for HPLC (2). Suitable for cell permeabilization (3) and DNA isolation (4). Increases the efficiency of chemiluminescence (5, 6).

Assay (titr.) min. 99.0 %

References:

1. Eley, M. et al. (1979) Anal. Biochem. ***92,*** 411-9
2. Hansen, S.H. et al. (1981) J. Chromatogr. ***210,*** 453-60
3. Joshi, M.S. et al. (1989) Biotechnol. Lett. ***11,*** 349-52
4. Milligan, B.G. (1989) Plant Mol. Biol. Rep. ***7,*** 144-9
5. Abdel-Latif, M.S. & Guibault, G.G. (1989) Anal. Chim. Acta ***221,*** 11-7
6. Aiken, J.H. & Huie, C.W. (1991) Anal. Lett. ***24,*** 167-80

Cat.No.	Size
16530.04	100 g
16530.02	500 g

CHAPS

see 16530 3-[(3-Cholamidopropyl)dimethylammonio]-1-propanesulfonate, page 29

Chemiluminescence Reagent for Horseradish Peroxidase

HS 38220000
Storage temperature +2 °C to +8 °C

Ready-to-use substrate solution for chemiluminescence detection of membrane bound antigens or nucleic acid sequences directly with Horseradish Peroxidase (HRP) or indirectly with HRP-conjugated antibodies or Streptavidin labelled (1). Prior before use add 30 % hydrogen peroxide in a 1:1000 dilution (not provided) and use 100 µl/cm².

- High resolution and sensitivity
- Short exposure time
- Document your results on film or with a chemiluminescence applicable gel documentation system.

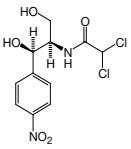
References:

1. Thorpe, G.H.G. and Kricka, L. J. (1986) Methods Enzymol.***133***, 331 – 353

Cat.No.	Size
42582.01	250 ml
42582.02	500 ml

Chloramphenicol research grade, Ph. Eur.

(Chloromycetin; D-threo-2,2-dichloro-N-[β-hydroxy-α(hydroxymethyl)-β-(4-nitrophenyl)ethyl]acetamide; D-threo-2-dichloroacetamido-1-(4-nitrophenyl)-‘1,3-propanediol)



$C_{11}H_{12}Cl_2N_2O_5$ ♦ M_r 323.1 ♦ CAS [56-75-7]

DANGER
H317-H334-H340-H350-H361d ♦
EINECS 200-287-4 ♦ WGK 3 ♦ HS 29414000

Blocks bacterial protein synthesis by inhibiting the peptidyl transferase activity of the 50S ribosomal subunit. Determination in serum by HPLC (1,2), in meat (3). Molecular basis for chloramphenicol resistance (5,6), effects on plants (7). Used for the selection of clones (8).
50 mg/ml in ethanol yield a clear, very faint yellow solution. For selection of chloramphenicol-resistant *Escherichia coli* a concentration of 30 - 50 µg/ml are typically used.

Assay (UV) 98.0 - 102.0 %

References:

1. Wal, J. et al. (1978) J. Chromatogr. ***145,*** 502-6
2. Danzer, L.A. (1983) Clin. Chem. ***29,*** 856-8
3. Rüssel, H. (1978) Chromatographia ***11***, 341-3
4. Long, K.S. & Porse, B.T. (2003) Nucl. Acids Res. ***31***,7208-15
5. Izard, T. (2001) Protein Sci. ***10***, 1508-13
6. Schwarz, S. et al. (2004) FEMS Microbiol. Rev. ***28***, 519-42
7. Zhu, H. et al. (2011) Int. J. Agric. Biol. ***13***, 677-82
8. Munshi, T. et al. (2013) PLOS ONE ***8(3)***:e60143

Cat.No.	Size
16785.03	25 g
16785.02	100 g

Chloroform molecular biology grade

(Trichloromethane)
$CHCl_3$ ♦ M_r 119.4 ♦ CAS [67-66-3]

WARNING
H302-H315-H319-H331-H351-H361d-H372 ♦ Carc. 2 ♦ MAK/TRK 2.5 mg/m³; 0.5 ml/m³ ♦ EG-Index 602-006-00-4 GGVSE/ADR 6.1 III UN1888 ♦ IATA 6.1 III UN1888 ♦ EINECS 200-663-8 ♦ WGK 3L ♦ HS 29031300

Suitable for nucleic acid purification and for removal of traces of phenol from aqueous DNA and RNA samples.

Assay (GC)	99.9 - 100.0 %
Density (20 °C)	1.478 - 1.482
Water	max. 0.05 %
Acidity	max. 0.001 %
Residue on evaporation (w/w %)	max. 0.0005 %

Cat.No.	Size
39553.01	250 ml

Chloroform analytical grade

(Trichloromethane)
$CHCl_3$ ♦ M_r 119.4 ♦ CAS [67-66-3]

DANGER
H302-H315-H319-H331-H351-H361d-H372 ♦ EG-Index 602-006-00-4 ♦ GGVSE/ADR 6.1 III UN1888 ♦ IATA 6.1 III UN1888 ♦ EINECS 200-663-8 ♦ WGK 3 L ♦ HS 29031300

Widely used solvent in biochemical and molecular biology applications, suitable in combination with methanol for protein precipitation according to Wessel & Flügge (1).

Assay (GC)	99.9 - 100.0 %
Density (20 °C)	1.478 – 1.482
Water	max. 0.05 %
Acidity	max. 0.001 %
Residue on evaporation (w/w %)	max. 0.0005 %

References:
1. Wessel, D Flügge, U.I. (1984) Anal. Biochem. ***138***, 141-43

Cat.No.	Size
45627.03	1 L

Chloroform:Isoamyl alcohol 24:1 molecular biology grade

WARNING
H302-H315-H335-H351-H373 ♦ GGVSE/ADR 6.1 III UN2810 ♦ IATA 6.1 III UN2810 ♦ WGK 3 ♦ HS 38220000

DNase, RNase, Proteases not detected. Mixture of chloroform and isoamyl alcohol (ratio 24:1). Bottled under inert gas. Suitable for nucleic acid purification. Improves efficiency of nucleic acid extraction.

Assay

Chloroform (cat. no. 39553)	min. 99.9 %
Isoamyl alcohol (cat. no. 39557)	min. 99.0 %

References:
1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (E.3-E.4)

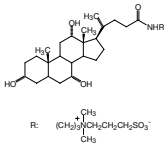
Cat.No.	Size
39554.02	500 ml

Chloromycetin

see 16785 Chloramphenicol, page 29

3-[(3-Cholamidopropyl)dimethylammonio]-1-propanesulfonate research grade

(CHAPS)
$C_{32}H_{58}N_2O_7S$ ♦ M_r 614.9 ♦ CAS [75621-03-3]



WARNING
H315-H319-H335 ♦ WGK 1 ♦ HS 29239000

Zwitterionic surfactant. Particularly useful for solubilizing and electrophoresis of membrane proteins (1 - 5). Suitable also for enzyme immunoassay (6).

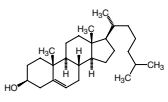
Assay (from HPLC) min. 97.0 %

References:
1. Hjelmeland, L.M. (1980) Proc. Natl. Acad. Sci. USA ***77,*** 6368-70
2. Naldini, L. et al. (1990) Biochemistry ***29,*** 5153-60
3. Kierdaszuk, B. & Eriksson, S. (1990) Biochemistry ***29,*** 4109-114
4. Bonfils, C. & Combalbert, J. (1990) Electrophoresis ***11,*** 182-6
5. Ambar, J. et al. (1989) Eur. J. Pharmacol. ***170,*** 119-20
6. Leblond, F.A. et al. (1989) J. Immunol. Methods ***124,*** 71-5

Cat.No.	Size
17038.02	5 g
17038.03	25 g
17038.04	100 g

Cholesterol cryst. research grade

(3β-Hydroxy-5-cholestene; 5-Cholesten-3β-ol)
$C_{27}H_{46}O$ ♦ M_r 386.7 ♦ CAS [57-88-5]



EINECS 200-353-2 ♦ WGK 1L ♦ HS 29061900

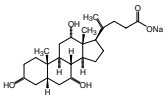
Cholesterol is a structural component of cell membranes, which determines the fluidity and permeability of the membrane. In addition, it regulates the functions of the transporter and signaling proteins present on the plasma membrane.

Assay (GC) min. 95.0 %

Cat.No.	Size
17101.01	100 g

Cholic acid·Na-salt analytical grade

(Sodium cholate)
$C_{24}H_{39}O_5$·Na ♦ M_r 430.5 ♦ CAS [361-09-1]



EINECS 206-643-5 ♦ WGK 1 ♦ HS 29181930

Important surfactant in membrane chemistry. Excellent solubilizer for receptors, pigments and phospholipids.

Assay (titr.) min. 98.0

References:
1. Helenius, A. et al. (1979) Methods Enzymol ***56,*** 734-49
2. Lopez-Corcuera, B. & Aragon, C. (1989) Eur. J. Biochem. ***181,*** 519-24
3. Kavanaugh, M.P. et al. (1989) J. Neurochem. ***53,*** 1575-80
4. Malloy, R.C. & Binford, J.S. Jr. (1990) J. Phys. Chem. ***94,*** 337-45

Cat.No.	Size
17126.02	100 g
17126.03	500 g

Chromotrope FB

see 14410 Azorubin, page 15

Ciprofloxacin Hydrochloride research grade

CAS [86393-32-0]

WARNING
H319-H412 ♦ WGK 2 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Ciprofloxacin HCl is a second generation fluoroquinolone antibiotic. Fluoroquinolone antibiotics target bacterial DNA gyrase, an enzyme which reduces DNA strain during replication. Because DNA gyrase is required during DNA replication, subsequent DNA synthesis and cell division is inhibited.
Ciprofloxacin is a broad spectrum antibiotic targeting a wide variety of gram positive and gram negative bacteria. Many mycoplasma strains, inclusive *A. laidlawii, M. orale, M. hyorhinis, M. fermentas*, and *M. arginine*, react sensitive to ciprofloxacin. Since these strains are responsible for most of the contaminations in cell culture, it can be used for removal of mycoplasma contamination. At the recommended concentration of ca. 1 µg/ml no cytotoxic effects occur.
Ciprofloxacin HCl is freely soluble at 35 mg/ml.

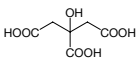
Content (dry substance)	98.0 - 102.0 %
pH	pH 3.5 – 4.5

References:
1. Wolfson, John S., & Hooper D. C. (1985) Am. Soc. for Microbiol. 4th ser. ***28***, 581 - 86

Cat.No.	Size
47977.01	5 g

Citric acid·H_2O analytical grade

$C_6H_8O_7$·H_2O ♦ M_r 210.1 ♦ CAS [5949-29-1]



WARNING
H319 ♦ EINECS 201-069-1 ♦ WGK 1 ♦ HS 29181400

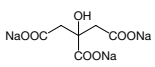
Used to prepare citrate buffer for antigen retrieval of tissue samples. The citrate solution is designed to break protein cross-links, thus unmasking antigens and epitopes in formalin-fixed and paraffin embedded tissue sections, and resulting in enhanced staining intensity of antibodies. It has an anticoagulant activity and forms as a calcium chelator complexes that disrupt the tendency of blood to clot.

Assay (hydrate) 99.5 - 101.0 %

Cat.No.	Size
38640.01	500 g
38640.02	1 kg

Citric acid·Na_3-salt·$2H_2O$ analytical grade, Ph. Eur.

(tri-Sodium citrate)
$C_6H_5O_7$·Na_3·$2H_2O$ ♦ M_r 294.1 ♦ CAS [6132-04-3]



EINECS 200-675-3 ♦ WGK 1L ♦ HS 29181500

Buffering agent, resisting changes in pH. Due to its chelating effect and stabilization of nucleic acids, it is used for preparation of sodium citrate buffer for use in SSC solution and other buffers for molecular biology.

Assay (titr.) 99.0 - 101.0 %

Cat.No.	Size
38642.02	1 kg

Clamps

HS 90330000

For thin layer techniques, 6 cm wide. Special bulldog-type with stoppers to prevent bending of clamped glass plates.

Cat.No.	Size
42921.01	12 pieces

CleanGel 10 % 25S Size: 250 x 125 x 0.43 mm

HS 38220000
Storage temperature -15 °C to -25 °C

0.43 mm thin, film-backed, rehydratable precast polyacrylamide gel, 25 slots for 15 µl. For the run on horizontal flatbed systems, such as HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43338.01	4 gels

CleanGel 10 % 52S Size: 250 x 125 x 0.43 mm

HS 38220000
Storage temperature -15 °C to -25 °C

0.43 mm thin, film-backed, rehydratable precast polyacrylamide gel, 52 slots for 6 µl. For the run on horizontal flatbed systems, such as HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43340.01	4 gels

CleanGel IEF for PhastSystem™ Size: 50 x 42 x 0.43 mm

HS 38220000
Storage temperature -15 °C to -25 °C

Rehydratable film supported polyacrylamide mini gel for IEF on PhastSystem™.

Cat.No.	Size
43350.01	20 gels

Cleland's reagent

see 20711 Dithiothreitol, page 40

Cleland's reagent

see 20710 Dithiothreitol, page 40

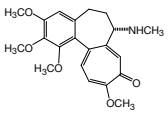
Cleland's reagent

see 20697 Dithioerythritol, page 40

Colcemid

see 18238 Demecolcine, page 36

Colcemid™ solution 10 µg/ml sterile filtered



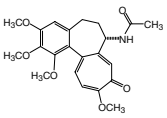
(Demecolcine solution)
HS 38220000
Storage temperature -15 °C to -25 °C

Colchicine inhibits microtubule polymerization by binding to tubulin, which disrupts spindle formation during mitosis. Since increased rate of mitosis is associated with cancer cell proliferation, blocking microtubule function with colchicine has been used as an approach to anti-cancer therapy. Its mitosis-inhibiting function is also utilized to perform karyotypes in genetic studies.
Colchicine blocks chromosome segregation during meiosis. Therefore it is used to induce polyploidy (tetraploid) in plant cells.

Cat.No.	Size
47253.01	25 ml

Colchicine cryst. research grade, USP

$C_{22}H_{25}NO_6$ ♦ M_r 399.44 ♦ CAS [64-86-8]



DANGER
H300-H340 ♦ Muta. 1B ♦ EG-Index 614-005-00-6 ♦ GGVSE/ADR 6.1 I UN1544 ♦ IATA 6.1 I UN1544 ♦ EINECS 200-598-5 ♦ WGK 3L ♦ HS 29399900

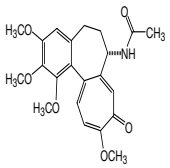
Colchicine inhibits microtubule polymerization by binding to tubulin, which disrupts spindle formation during mitosis. Since increased rate of mitosis is associated with cancer cell proliferation, blocking microtubule function with colchicine has been used as an approach to anti-cancer therapy. Its mitosis-inhibiting function is also utilized to perform karyotypes in genetic studies. Colchicine blocks chromosome segregation during meiosis. Therefore it is used to induce polyploidy (tetraploid) in plant cells.

Assay (HPLC) 94.0 - 101.0 %

Cat.No.	Size
77120.01	250 mg
77120.02	1 g
77120.03	5 g

Colchicine solution 10 µg/ml sterile filtered

HS 38220000
Storage temperature -15 °C to -25 °C



In PBS.
Colchicine inhibits microtubule polymerization by binding to tubulin, which disrupts spindle formation during mitosis. Since increased rate of mitosis is associated with cancer cell proliferation, blocking microtubule function with colchicine has been used as an approach to anti-cancer therapy. Its mitosis-inhibiting function is also utilized to perform karyotypes in genetic studies. Colchicine blocks chromosome segregation during meiosis. Therefore it is used to induce polyploidy (tetraploid) in plant cells.

Cat.No.	Size
47252.01	25 ml

Collagen R solution 0.2 % sterile

M_r ca. 300 000

HS 35040090
Storage temperature +2 °C to +8 °C

Type 1 rat tail collagen; 2 mg/ml in 0.1 % acetic acid. Excellent substrate for the culture of hepatocytes, fibroblasts, and epithelial cells. Preparation of collagen film and gels (1, 2).

References:
1. Strom, S.C. & Michalopoulos, G. (1982) Methods Enzymol. ***82,*** 544-55
2. Miller, E.J. (1976) Mol. Cell. Biochem. ***13,*** 165-91

Cat.No.	Size
47254.01	20 ml
47254.02	100 ml

Collagen R solution 0.4 % sterile

M_r ca. 300 000

HS 38220000
Storage temperature +2 °C to +8 °C

Type I rat tail collagen; 4 mg/ml in 0.1 % acetic acid. Excellent substrate for the culture of hepatocytes, fibroblasts, and epithelial cells. Preparation of collagen film and gels (1, 2).

References:
1. Strom, S.C. & Michalopoulos, G. (1982) Methods Enzymol. ***82,*** 544-55
2. Miller, E.J. (1976) Mol. Cell. Biochem. ***13,*** 165-91

Cat.No.	Size
47256.01	20 ml

Collagenase substrate per E. Wünsch

(4-Phenylazobenzyloxycarbonyl-Pro-Leu-Gly-Pro-D-Arg)
$C_{38}H_{52}N_{10}O_8$ ♦ M_r 776.9 ♦ CAS [17011-78-8]

EINECS 241-086-1 ♦ WGK 1 ♦ HS 29241900
Storage temperature -15 °C to -25 °C

Collagenase catalyzes the hydrolysis of the chromo-peptide Phenylazobenzyloxycarbonyl-Pro-Leu-Gly-Pro-D-Arg. The resulting fragment Phenylazobenzyloxycarbonyl-Pro-Leu can be spectrophotometrically detected.

Purity (HPLC) > 97.0 %

References:
1. Wünsch, E. & Heidrich, H.G. (1963) Hoppe-Seyler's Z. Physiol. Chem. ***333,*** 149-51
2. Evans, C.H. (1981) Biochem. J. ***195,*** 677-84
3. Strauch, L. & Vencelj, H. (1967) Hoppe-Seyler's Z. Physiol. Chem. ***348,*** 465-8
4. Reil-Dlouha, V. et al. (1976) J. Mol. Biol. ***107,*** 293-305
5. Nagelschmidt, M. et al. (1979) Biochem. Biophys. Acta ***571,***105-11

Cat.No.	Size
52268.02	50 mg

Comb 1.0 mm, 10 wells, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

Cat.No.	Size
BV-10-1.0	1 piece

Comb 1.0 mm, 12 wells, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

Cat.No.	Size
BV-12-1.0	1 piece

Comb 1.0 mm, 15 wells, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

Cat.No.	Size
BV-15-1.0	1 piece

Comb 1.5 mm, 10 wells, for BlueVertical™ PRiME™ Casting Stand

HS 39269097

Cat.No.	Size
BV-10-1.5	1 piece

Comb 1.5 mm, 12 wells, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

Cat.No.	Size
BV-12-1.5	1 piece

Comb 1.5 mm, 15 Wells, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

Cat.No.	Size
BV-15-1.5	1 piece

Comb 0.75 mm, 15 wells, for BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	15
Thickness of comb (mm):	0.75
Width of well (mm):	6
Depth of well (mm):	10
Sample volume (µl)	14

Cat.No.	Size
BM-100-15-0.75	1 piece

Comb 1.0 mm, 10 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	10
Thickness of comb (mm):	1.0
Width of well (mm):	12
Depth of well (mm):	10
Sample volume (µl)	35

Cat.No.	Size
BM-200-10-1.0	1 piece

Comb 1.0 mm, 12 wells, for BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	12
Thickness of comb (mm):	1.0
Width of well (mm):	3.7
Depth of well (mm):	10
Sample volume (µl)	10

Cat.No.	Size
BM-100-12-1.0	1 piece

Comb 1.0 mm, 16 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	16
Thickness of comb (mm):	1.0
Width of well (mm):	7
Depth of well (mm):	10
Sample volume (µl)	20

Cat.No.	Size
BM-200-16-1.0	1 piece

Comb 1.0 mm, 2 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Preparative comb.

Number of wells:	1+2
Thickness of comb (mm):	1.0
Width of well (mm):	125
Depth of well (mm):	10
Sample volume (µl)	375

Cat.No.	Size
BM-200-P2-1.0	1 piece

Comb 1.0 mm, 20 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	20
Thickness of comb (mm):	1.0
Width of well (mm):	5
Depth of well (mm):	10
Sample volume (µl)	15

Cat.No.	Size
BM-200-20-1.0	1 piece

Comb 1.0 mm, 26 wells-MC, for BM-200 (Gel width 15 cm)

HS 39269097

Multichannel-pipette comb

Number of wells:	26
Thickness of comb (mm):	1.0
Width of well (mm):	4
Depth of well (mm):	10
Sample volume (µl)	12

Cat.No.	Size
BM-200-M26-1.0	1 piece

Comb 1.0 mm, 26 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	26
Thickness of comb (mm):	1.0
Width of well (mm):	4
Depth of well (mm):	10
Sample volume (µl)	12

Cat.No.	Size
BM-200-26-1.0	1 piece

Comb 1.0 mm, 31 wells-MC, for BM-200 (Gel width 15 cm)

HS 39269097

Multichannel-pipette comb

Number of wells:	31
Thickness of comb (mm):	1.0
Width of well (mm):	3
Depth of well (mm):	10
Sample volume (µl)	9

Cat.No.	Size
BM-200-M31-1.0	1 piece

Comb 1.0 mm, 8 wells, for BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	8
Thickness of comb (mm):	1.0
Width of well (mm):	6.0
Depth of well (mm):	10
Sample volume (µl)	18

Cat.No.	Size
BM-100-8-1.0	1 piece

Comb 1.5 mm, 10 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	10
Thickness of comb (mm):	1.5
Width of well (mm):	12
Depth of well (mm):	10
Sample volume (µl)	52

Cat.No.	Size
BM-200-10-1.5	1 piece

Comb 1.5 mm, 12 wells, für BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	12
Thickness of comb (mm):	1.5
Width of well (mm):	3.7
Depth of well (mm):	10
Sample volume (µl)	17

Cat.No.	Size
BM-100-12-1.5	1 piece

Comb 1.5 mm, 14 wells, for BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	14
Thickness of comb (mm):	1.5
Width of well (mm):	3.0
Depth of well (mm):	10
Sample volume (µl)	14

Cat.No.	Size
BM-100-14-1.5	1 piece

Comb 1.5 mm, 16 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	16
Thickness of comb (mm):	1.5
Width of well (mm):	7
Depth of well (mm):	10
Sample volume (µl)	30

Cat.No.	Size
BM-200-16-1.5	1 piece

Comb 1.5 mm, 2 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Preparative comb

Number of wells:	1+2
Thickness of comb (mm):	1.5
Width of well (mm):	125
Depth of well (mm):	10
Sample volume (µl)	565

Cat.No.	Size
BM-200-P2-1.5	1 piece

Comb 1.5 mm, 20 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	20
Thickness of comb (mm):	1.5
Width of well (mm):	5
Depth of well (mm):	10
Sample volume (µl)	20

Cat.No.	Size
BM-200-20-1.5	1 piece

Comb 1.5 mm, 26 wells-MC, for BM-200 (Gel width 15 cm)

HS 39269097

Multichannel-pipette comb

Number of wells:	26
Thickness of comb (mm):	1.5
Width of well (mm):	4
Depth of well (mm):	10
Sample volume (µl)	18

Cat.No.	Size
BM-200-M26-1.5	1 piece

Comb 1.5 mm, 26 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	26
Thickness of comb (mm):	1.5
Width of well (mm):	4
Depth of well (mm):	10
Sample volume (µl)	18

Cat.No.	Size
BM-200-26-1.5	1 piece

Comb 1.5 mm, 8 wells, for BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	8
Thickness of comb (mm):	1.5
Width of well (mm):	6.0
Depth of well (mm):	10
Sample volume (µl)	28

Cat.No.	Size
BM-100-8-1.5	1 piece

Comb 2.0 mm, 1 well, for BM-100 (Gel width 7 cm)

HS 39269097

Preparative comb

Number of wells:	1
Thickness of comb (mm):	2.0
Width of well (mm):	55.0
Depth of well (mm):	10
Sample volume (µl)	330

Cat.No.	Size
BM-100-P1-2.0	1 piece

Comb 2.0 mm, 10 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	10
Thickness of comb (mm):	2.0
Width of well (mm):	12
Depth of well (mm):	10
Sample volume (µl)	70

Cat.No.	Size
BM-200-10-2.0	1 piece

Comb 2.0 mm, 12 wells, für BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	12
Thickness of comb (mm):	2.0
Width of well (mm):	3.7
Depth of well (mm):	10
Sample volume (µl)	20

Cat.No.	Size
BM-100-12-2.0	1 piece

Comb 2.0 mm, 14 wells, for BM-100 (Gel width 7 cm)

HS 39269097

Number of wells:	14
Thickness of comb (mm):	2.0
Width of well (mm):	3.0
Depth of well (mm):	10
Sample volume (µl)	9

Cat.No.	Size
BM-100-14-2.0	1 piece

Comb 2.0 mm, 16 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	16
Thickness of comb (mm):	2.0
Width of well (mm):	7
Depth of well (mm):	10
Sample volume (µl)	40

Cat.No.	Size
BM-200-16-2.0	1 piece

Comb 2.0 mm, 2 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Preparative comb

Number of wells:	1+2
Thickness of comb (mm):	2.0
Width of well (mm):	125
Depth of well (mm):	10
Sample volume (µl)	750

Cat.No.	Size
BM-200-P2-2.0	1 piece

Comb 2.0 mm, 20 wells, for BM-200 (Gel width 15 cm)

HS 39269097

Number of wells:	20
Thickness of comb (mm):	2.0
Width of well (mm):	5
Depth of well (mm):	10
Sample volume (µl)	25

Cat.No.	Size
BM-200-20-2.0	1 piece

Comb 2.0 mm, 26 wells-MC, for BM-200 (Gel width 15 cm)

HS 39269097

Multichannel-pipette comb

Number of wells:	26
Thickness of comb (mm):	2.0
Width of well (mm):	4
Depth of well (mm):	10
Sample Volume (µl)	24

Cat.No.	Size
BM-200-M26-2.0	1 piece

Comb 2.0 mm, 26 wells, for BM-200 (Gel width 15 cm)

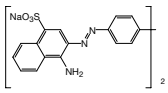
HS 39269097

Number of wells:	26
Thickness of comb (mm):	2.0
Width of well (mm):	4
Depth of well (mm):	10
Sample volume (µl)	24

Cat.No.	Size
BM-200-26-2.0	1 piece

Congo Red research grade

(Direct Red 28)
C.I.22120 ♦ $C_{32}H_{22}N_6O_6S_2 \cdot Na_2$ ♦ M_r 696.7 ♦
CAS [573-58-0]



DANGER
H350-H361d ♦ Carc. 1B, Repr. 2 ♦ EG-Index 611-027-00-8 ♦ GGVSE/ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦ EINECS 209-358-4 ♦ WGK 2L ♦ HS 32049000

Tested for use in histology. Indicator pH 3.0 - 5.2 blue-reddish orange.

Cat.No.	Size
27215.01	25 g

Cooling Contact Fluid

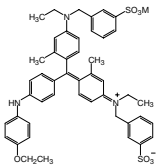
HS 90272000
Storage temperature +2 °C to +8 °C

Cooling fluid specially formulated for use in horizontal electrophoresis. Sufficient for running 10 (50 ml) or 30 (150 ml) large format gels or 25 (50 ml) or 75 (150 ml) small format gels.

Cat.No.	Size
43371.01	50 ml
43371.02	3 x 50 ml

Coomassie® Brilliant Blue G 250

C.I. 42655 ♦ $C_{47}H_{48}N_3O_7S_2 \cdot Na$ ♦ M_r 854.0 ♦
CAS [6104-58-1]



EINECS 228-058-4 ♦ WGK 2L ♦ HS 32041200

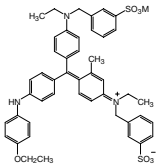
Corresponds to SERVA Blue G (cat. no. 35050).

λmax. (0.001 %, pH 7)	585 ± 5 nm
A 1 cm/λmax./1 % pH 7	ca. 500
Water	max. 10.0 %
TLC	corresponds

Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
17524.01	25 g
17524.02	100 g

Coomassie® Brilliant Blue R 250



C.I. 42660 ♦ $C_{45}H_{44}N_3O_7S_2$·Na ♦ M_r 826.0 ♦ CAS [6104-59-2]

EINECS 228-060-5 ♦ WGK 2L ♦ HS 32041200

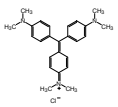
Corresponds to SERVA Blue R (cat. no. 35051).

Assay (UV)	min. 75.0 %
Water (KF)	max. 10.0 %
TLC	corresponds

Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
17525.01	25 g
17525.02	100 g

Crystal Violet research grade



(Basic Violet 3; Hexamethylpararosaniline·HCl; Gentian Violet 10B; Methyl Violet 10B)
C.I.42555 ♦ $C_{25}H_{30}ClN_3$ ♦ M_r 408.0 ♦ CAS [548-62-9]

DANGER
H302-H318-H351-H410 ♦ Carc. 2 ♦
EG-Index 612-204-00-2 ♦ GGVSE/ADR 9 III UN3077 ♦ IATA 9 III UN3077 ♦ EINECS 208-953-6 ♦ WGK 3 ♦ HS 32049000

This dye is chemically homogeneous and well-defined, particularly recommended for Flemming and gram staining because of reproducible results. Commercial preparations usually contain components of reddish tinge like methyl violet 2B. Indicator pH 0.0 - 1.8.

λ max.	580 - 600 nm
A 1 cm/λ max. (0.0001 % in water)	min. 0.13

Cat.No.	Size
27335.01	25 g

CSF Analysis Kit for PhastSystem™

HS 38220000
Storage temperature -15 °C to -25 °C

Format 50 x 42 x 0.43 mm.
Contains 10 rehydratable, film supported mini horizontal polyacrylamide gels for CSF analysis on PhastSystem™.

Cat.No.	Size
43393.01	1 kit

CTAB

see 16530 Cetyltrimethylammonium·bromide, page 29

CTAB DNA Extraction Buffer molecular biology grade

HS 38220000

Cetyltrimethylammonium-bromide (CTAB) is a non-ionic detergent, which forms insoluble complexes with nucleic acids if the sodium chloride concentration in the solution is around 0.5 M. Polysaccharides, phenolic components and other enzyme-inhibiting impurities from lysates of plant cells can be effectively removed with the CTAB lysis buffer (1).
Contains 2 % CTAB, 20 mM EDTA·Na_2·$2H_2O$, 1.4 mM NaCl and 100 mM Tris, pH 8.

References:

1. Ed. Ausubel et al., (2001) Current Protocols in Molecular Biology, Greene Publishing & Wiley-Interscience Inc. (New York, NY), Suppl. ***45***, 2.3.5

Cat.No.	Size
39809.01	500 ml

Cyanase™ Nuclease

HS 35079090
Storage temperature -15 °C to -25 °C ✻

Supplied as solution in 50 mM Tris-HCl pH 8.0, 5 mM $MgSO_4$, 50 % (v/v) glycerol.
Cyanase™ is a cloned highly active non-Serratia based non-specific endonuclease that degrades single and double stranded DNA and RNA in as little as 1 minute.
Because of its unique properties, Cyanase™ is effective for cell lysate clearance, protein and viral purification and nucleic acid removal from samples.

- Fastest nuclease on the market
- Broad pH range
- Active in higher salt concentrations
- Unaffected by lysozyme or detergent
- Unsurpassed stability, can be stored up to 1 year at room temperature with minimal loss of activity

Concentration	50 U/µl
pH optimum	pH 7.5 - 8.0
Salt optimum	20 mM NaCl
Temperature optimum	24 °C – 37 °C

Unit definition: One unit is the amount of enzyme that degrades 3 µg of full length λ DNA completely at 37 °C in 1 minute in 50 mM Tris-HCl pH 8.0, 6 mM $MnSO_4$.

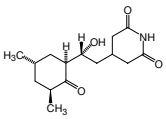
Cyanase = trademark of RiboSolutions, Inc.

Cat.No.	Size
18542.01	10.000 U
18542.02	25.000 U

Cyanocobalamin

see 38310 Vitamin B_{12}, page 157

Cycloheximide cryst. pure



(Actidione®; β-[2-(3,5-Dimethyl-2-oxocyclohexyl)-2-hydroxyethyl]-glutarimide))
$C_{15}H_{23}NO_4$ ♦ M_r 281.4 ♦ CAS [66-81-9]

DANGER
H300-H341-H360D-H411
♦ Muta. 2, Repr. 1B ♦
EG-Index 613-140-00-8 ♦ GGVSE/ADR 6.1 I UN2811 ♦ IATA 6.1 I UN2811 ♦ EINECS 200-636-0 ♦ WGK 3L ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Glutarimide antibiotic isolated from *Streptomyces griseus*; active against fungi and yeasts, but not against bacteria. Inhibits eukaryotic protein synthesis by blocking the translocation step in the elongation cycle (1,3,8). Blocks translation of mRNA on cytosolic but not on mitochondrial or chloroplast ribosomes (2,4,6).

Assay (HPLC)	min. 90.0 %
MP	98 - 112 °C

Actidione = registered trademark of Upjohn.

References:

1. McKeehan, W. & Hardesty, B. (1969) Biochem. Biophys. Res. Commun. ***36,*** 625-30
2. Neupert, W. et al. (1969) Eur. J. Biochem. ***10***, 589-91
3. Obrig, T.G. et al. (1971) J. Biol. Chem. ***246***, 174-81
4. Avadhani, N.G. & Buetow, D.E. (1972) Biochem. J. ***128***, 353-65
5. Jilek, F. et al. (2000) Animal Reprod. Sci. ***63***, 101-11
6. Hanten, J.J. & Pierce, S.K. (2001) Biol. Bull. ***201***, 34-44
7. Jin, S. et al. (2008) Am. J. Physiol. ***294***, G928-37
8. Schneider-Poetsch, T. et al. (2010) Nat. Chem. Biol. ***6***, 209-17

Cat.No.	Size
10700.04	1 g
10700.02	5 g
10700.03	25 g

L-Cysteine·HCl·H_2O cryst. research grade, Ph. Eur., USP

(Cys-HCl; L-2-Amino-d-mercaptopropionic acid hydrochloride)
$C_3H_7NO_2S·HCl·H_2O$ ♦ M_r 175.6 ♦ CAS [7048-04-6]

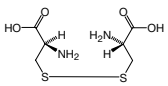
WARNING
H315-H319-H335 ♦ EINECS 200-157-7 ♦ WGK 1L ♦ HS 29309016

Assay (titr.) 98.5 - 101.0 %

Cat.No.	Size
17769.01	25 g
17769.02	100 g
17769.03	250 g
17769.04	1 kg

L-Cystine research grade, Ph. Eur.

((Cys)$_2$; L(-)-3,3'-Dithiobis(2-aminopropanoic acid))
$C_6H_{12}N_2O_4S_2$ ♦ M_r 240.3 ♦ CAS [56-89-3]



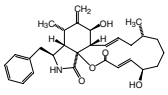
EINECS 200-296-3 ♦ WGK - ♦ HS 29309013

Assay (titr.) 98.5 - 101.0 %
Heavy metals (Pb) max. 10 ppm

Cat.No.	Size
17880.02	250 g

Cytochalasin B

$C_{29}H_{37}NO_5$ ♦ M_r 479.6 ♦ CAS [14930-96-2]



DANGER
H300-H310-H330-H361d ♦ GGVSE/ADR 6.1 II UN2811 ♦
IATA 6.1 II UN2811 ♦ EINECS 239-000-2 ♦ WGK 2 ♦ HS 29339980
Storage temperature +2 °C to +8 °C

From *Drechslera dematoidea*. Reversible inhibitor of cell motion (1). Inhibits phagocytosis (2). Induces polyploidy (3). Induces nuclear extrusion (4, 5).

Assay (HPLC) > 98.0 %
Assay (TLC) > 98.0 %

References:

1. Becker, E. et al. (1972) J. Immunol. ***108,*** 396-401
2. Davis, A. et al. (1971) Proc. Soc. Exp. Biol. Med. ***137,*** 161- 7
3. Hoehn, H. et al. (1972) Fed. Proc. ***31,*** A 607-8
4. Krishan, A. (1972) J. Cell Biol. ***54,*** 657- 62
5. Prescott, D. (1972) Exp. Cell Res. ***71,*** 480-3

Cat.No.	Size
18015.01	1 mg
18015.02	5 mg

Cytochrome C from porcine heart lyophil.

M_r ca. 12 300 ♦ CAS [9007-43-6]

EINECS 232-700-9 ♦ HS 35040090
Storage temperature -15 °C to -25 °C

Iron (Fe) content ca. 0.3 %. Approx. 10 % of the product may be present in the reduced form.

Assay reduced min. 90.0 %

Cat.No.	Size
18025.01	100 mg
18025.02	500 mg

D.E.R.® 736 pract.

(ERL-4206 plasticizer)
CAS [9072-62-2]

WARNING
H319 ♦ WGK 1L ♦ HS 39073000

Shorter chain than D.E.R.® 732, lower viscosity, gives less flexible blocks. Epoxy equivalent weight 175 - 205; viscosity 0.03 - 0.06 Pa·s at 25 °C.
Used in electron microscopy.

Density 1.129 - 1.150

D.E.R. is a registered trademark of Dow Chemical Company, USA.

References:

1. Kushida, H. (1966) J. Electron. Microsc. ***16,*** 278-80

Cat.No.	Size
18247.01	100 ml

DAB

see 18865 3,3'-Diaminobenzidine·4HCl·xH_2O, page 38

Dactinomycin

see 10710 Actinomycin D, page 4

DAPI

see 18860 4',6-Diamidino-2-phenylindole·2HCl, page 437

DDM

see 20780 Dodecyl-β-D-maltoside, page 41

DDSA

see 20755 2-Dodecenylsuccinic acid anhydride, page 40

Decal pract.

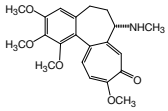
WARNING
H315-H319-H335 ♦ GGVSE/ADR 8 III UN1789 ♦ IATA 8 III UN1789 ♦ WGK 1 ♦ HS 38220000

For the rapid decalcification of histological sections. Contains max. 9.5 % hydrochloric acid and a catalytic calcium ion-chelating agent.

Cat.No.	Size
18140.02	500 ml

Demecolcine research grade

(Colcemid; N-Deacetyl-N-methylcolchicine)
$C_{21}H_{25}NO_5$ ♦ M_r 371.42 ♦ CAS [477-30-5]



DANGER
H300-H330 ♦ GGVSE/ADR 6.1 II UN1544 ♦ IATA 6.1 II UN1544 ♦ EINECS 207-514-6 ♦ WGK 3L ♦ HS 29399900

Storage Temperature: +15 °C to +30 °C

Demecolcine depolymerizes microtubules and limits microtubule formation. It inactivates spindle fiber mechanism during metaphase, systematically immobilizing chromosomes at the metaphase plate. Induces apoptosis by blocking mitosis in HeLa S3 cells. The mechanism of action is similar to that of colchicine, but with lower mammalian toxicity.

Assay (HPLC) min. 97.0 %

Colcemid = registered trademark of Ciba-Geigy.

Cat.No.	Size
18238.03	25 mg

Demecolcine solution

see 47253 Colcemid™ solution 10 µg/ml, page 31

Denhardt's solution, 50x concentrate molecular biology grade

HS 38220000
Storage temperature -15 °C to -25 °C **

DNase/RNase not detected.
Suitable for nucleic acid hybridization. Denhardt's solution is a mixture of blocking agents capable of saturating non-specific binding sites and to be used in membrane-based hybridization protocols. It is recommended for use with nylon membranes.

Composition:

Albumin Fraction V	0.1 g/10 ml
Polyvinylpyrrolidone	0.1 g/10 ml
Ficoll® 400	0.1 g/10 ml

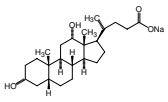
References:

1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (9.48-50, B.15)
2. Denhardt, D.T., (1966) Biochem. Biophys. Res. Commun. ***23***(5), 641-646

Cat.No.	Size
39603.01	10 ml

Deoxycholic acid·Na-salt pure

(Sodium deoxycholate)
$C_{24}H_{39}O_4 \cdot Na$ ♦ M_r 414.6 ♦ CAS [302-95-4]



WARNING
H302 ♦ EINECS 206-132-7 ♦ WGK 1 ♦ HS 29181930

For bacteriology and enzymology. Suitable for solubilization of many membrane proteins and phospholipids.

Assay	min. 98.0 %
Loss on drying	max. 5.0 %
Heavy metals (Pb)	max. 20 ppm

References:
1. McKernan, R.M. et al. (1989) J. Neurochem. ***52,*** 777-85
2. Bayerl, T.M. et al. (1989) Biochim. Biophys. Acta ***984,*** 214-24

Cat.No.	Size
18330.02	25 g
18330.03	100 g

Deoxyribonuclease I from Bovine Pancreas min. 3000 Kunitz units/mg lyophil.

(DNase I; Deoxyribonucleodepolymerase; Deoxyribonucleate 5'-oligo-nucleotide hydrolase)
EC 3.1.21.1 ♦ M_r 31 000 ♦ CAS [9003-98-9]

EINECS 232-667-0 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Cleaves preferentially double-stranded DNA (in the presence of Mg^{++}-ions single stranded DNA) in oligonucleotides with 5'-terminal phosphate groups.

Unit definition: 1 Kunitz unit catalyzes an increase in absorption of 0.001 at 260 nm per minute at 25 °C, pH 5.0 when acting on highly polymerized calf thymus DNA (1).

Activity: min. 3000 Kunitz units/mg lyophilisate

References:
1. Kunitz, M. (1950) J. Gen. Physiol. ***33***, 349-62
2. Laskowski, M. Sr. (1971) The Enzymes ***IV***, 3rd Ed. (Boyer, P.D.ed.) Acad. Press N.Y. 289-311
3. Moore, S. (1981) The Enzymes ***XIV***, 3rd Ed. (Boyer, P.D. ed.) Acad. Press N.Y. 281-96
4. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (5.83, 10.6-10.12, 15.14, 15.16, 15.27-15.31, 13.24-13.25, 13.28-13.29)

Cat.No.	Size
18535.01	25 mg
18535.02	100 mg

DEPC

see 18835 Diethyl pyrocarbonate, page 438

DePeX

WARNING
H226-H315 ♦ GGVSE/ADR 3 III UN1307 ♦ IATA 3 III UN1307 ♦ WGK 2 ♦ HS 38220000

Mounting medium for histology. Refractive index 1.52 - 1.53. Neutral solution of polystyrene and plasticizers in xylene.

Cat.No.	Size
18243.01	100 ml
18243.02	500 ml

Detergent 7 X® neutral, phosphate-free

WGK 1 ♦ HS 34022090

For tissue culture and molecular biology. Highly active cleaning material, guaranteed to be non-toxic for even the most sensitive organisms.

7 X = registered trademark of ICN Pharmaceuticals Inc.

Cat.No.	Size
34205.01	1 L
34205.02	10 L
34205.03	10 x 10 L

Dextran FP 40 research grade, Ph. Eur.

CAS [9004-54-0]

EINECS 232-677-5 ♦ WGK 2L ♦ HS 39139000

Molecular weight	35 000 - 45 000
Loss on drying	max. 7.0 %
Sulfated ash	max. 0.3 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
18665.02	500 g

Dextran 4 technical grade

CAS [9004-54-0]

EINECS 232-677-5 ♦ WGK 2L ♦ HS 39139000

Molecular weight 3500 - 7500

Cat.No.	Size
18687.01	100 g
18687.02	500 g

Dextran 8 technical grade

CAS [9004-54-0]

EINECS 232-677-5 ♦ WGK 2L ♦ HS 39139000

Molecular weight 8 000 - 12 000

Cat.No.	Size
18689.02	500 g

Dextran 100 technical grade

CAS [9004-54-0]

EINECS 232-677-5 ♦ WGK 2L ♦ HS 39139000

Molecular weight 90 000 - 110 000

Cat.No.	Size
18693.02	500 g

Dextran 500 technical grade

CAS [9004-54-0]

EINECS 232-677-5 ♦ WGK 2L ♦ HS 39139000

Molecular weight ca. 500 000

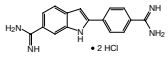
Cat.No.	Size
18696.01	100 g

Dextrose

see 22700 α-D-Glucose, page 54

4',6-Diamidino-2-phenylindole·2HCl analytical grade

(DAPI)
$C_{16}H_{15}N_5 \cdot 2HCl$ ♦ M_r 350.25 ♦ CAS [28718-90-3]



EINECS 249-186-7 ♦ WGK 1 ♦ HS 29339980
Storage temperature +2 °C to +8 °C

Fluorescent dye binding selectively to DNA. For demonstration of mycoplasmas and viruses in cells (1). For fluorescent chromosome staining (2). Dye for brain stem (3).

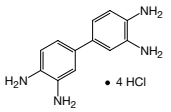
Purity	min. 98.0 %

References:
1. Russel, W.C. et al. (1975) Nature ***253,*** 461-2
2. Schweizer, D. (1976) Chromosoma (B.) ***58,*** 307-24
3. van der Kooy, D. & Kuypers, H.G.J.M. (1979) Science ***204,*** 873-5

Cat.No.	Size
18860.01	10 mg

3,3'-Diaminobenzidine·4HCl·xH$_2$O research grade

(DAB)
$C_{12}H_{14}N_4 \cdot 4HCl \cdot xH_2O$ ♦ M_r 360.1 (anhydr.) ♦ CAS [868272-85-9]



DANGER
H341-H350 ♦ Carc. 2 ♦ EINECS 231-018-9 ♦ WGK 3 ♦ HS 29215990
Storage temperature +2 °C to +8 °C

Vials under argon. For histology and ultrahistochemistry, yields osmiophilic oxidation products (1). Demonstration of ultrastructural peroxidase (2).

Assay (HPLC) min. 96.0 %

References:
1. Hanker, J.S. et al. (1972) Histochemie ***30,*** 201-14
2. Graham, R.C. & Karnovsky, M.J. (1966) J. Histochem. Cytochem. ***14,*** 291- 302

Cat.No.	Size
18865.02	1 g

Diazoresorcinol

see 34226 Resazurin·Na-salt, page 106

Diethyl pyrocarbonate research grade

(DEPC; Ethoxy formic anhydride; Pyrocarbonic acid diethyl ester)
$C_6H_{10}O_5$ ♦ M_r 162.14 ♦ CAS [1609-47-8]

WARNING
H302-H315-H319-H332-H335 ♦ EINECS 216-542-8 ♦ WGK 1 ♦ HS 29209085
Storage temperature +2 °C to +8 °C

Crosslinks proteins, reacts with histidine residues (1). RNase inhibitor (2). Sterilization of instruments: 20-minute treatment with a dilution of 1 ml/l (3). Removal of RNases from solutions (except those containing amines like Tris): Add DEPC to final conc. of 0.1 %, stir overnight and autoclave.

Assay (GC) min. 96.0 %

References:
1. Tsurushiin, S. et al. (1975) Biochim. Biophys. Acta ***410,*** 451-60
2. Berger, S.L. (1975) Anal. Biochem. ***67,*** 428-37
3. Pauli, O. & Genth, H. (1966) Z. Lebensm.-Unters.-Forsch. ***132***, 216-27

Cat.No.	Size
18835.01	10 ml

Digital Imaging and Analysis System III, basic

HS 90275000

The SERVA Digital Imaging and Analysis System III basic is the ideal solution to master the daily tasks of documentation.

Components:
- Darkroom cabinet (ca. 42 x 55 x 52 cm)
- UV filter
- Digital SLR camera

Cat.No.	Size
DIAS-III-B	1 piece

Digital Imaging and Analysis System L-340

HS 90275000

The Digital Imaging and Analysis System III from SERVA is a fast and convenient gel documentation system to master the daily tasks of documentation and 1D gel analysis. Solid hardware including a digital SLR camera and easy-to-grasp software are combined to provide an excellent tool to meet your needs. The camera is equipped with a UV-filter. UV-, blue- and white-light transilluminator or epi-white-light are optional.
The 1D analysis software LabImage L-320 as basis of L-340 allows automatic lane detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standards as well as multiple standards for one gel and has many different report and export functions. In addition L-340 includes grimace correction, Rf calibration and correction of multiple standards, can normalize not only single band but group of bands and has an additional export report to RFT and XLS. An additional module allows FDA 21 CFR Part 11 compliance.

Components:
- Darkroom cabinet (ca. 42 x 55 x 52 cm)
- UV filter
- Digital SLR Camera
- LabImage L-340

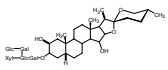
Cat.No.	Size
DIAS-III-L	1 piece

Digitin

see 19551 Digitonin water soluble, page 38

Digitonin analytical grade, USP

(Digitin)
$C_{56}H_{92}O_{29}$ ♦ M_r 1229.34 ♦ CAS [11024-24-1]



DANGER
H301-H311-H331 ♦ GGVSE/ADR 6.1 II UN2811 ♦ IATA 6.1 II UN2811 ♦ EINECS 234-255-6 ♦ WGK 3L ♦ HS 29389010

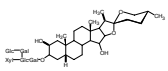
Naturally occurring surfactant especially useful for receptor solubilization. Frequently applied as hemolysis reagent and for permeabilization of certain types of cells e.g. blood platelets, hepatocytes, yeast or tumor cells. Also used for the estimation of cholesterol.

References:
1. Scallen, D.J. & Dietert, S.E. (1969) J. Cell Biol. ***40,*** 802- 13
2. Grigoriadis, D.E. et al. (1989) Endocrinology ***125,*** 3068-77
3. Hermann, P. et al. (1988) Photosynthetica ***22,*** 411-22
4. Boschmann, M. et al. (1989) Biomed. Biochim. Acta ***48,*** 645-52
5. Mooney, R.A. (1988) in Meth. Enzymol. ***159,*** (Corbin, J.D. & Johnson, R.A., Eds.) 193-202, Academic Press, Inc.

Cat.No.	Size
19550.01	500 mg
19550.02	1 g

Digitonin water soluble research grade

(Digitin)
$C_{56}H_{92}O_{29}$ ♦ M_r 1229.34 ♦ CAS [11024-24-1]



DANGER
H301-H311-H331 ♦ GGVSE/ADR 6.1 II UN2811 ♦ IATA 6.1 II UN2811 ♦ EINECS 234-255-6 ♦ WGK 3L ♦ HS 29389010

Turbidity: 1 g is suspended in 20 ml water and dissolved by heating to 95 - 98 °C for 15 minutes.

Cat.No.	Size
19551.01	250 mg
19551.02	1 g

2,2-Dihydroxy-1,3-indanedione

see 30410 Ninhydrin, page 83

4,6-Dihydroxy-2-thiopyrimidine

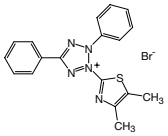
see 36108 2-Thiobarbituric acid, page 148

threo-1,4-Dimercapto-2,3-butanediol

see 20710 Dithiothreitol, page 43

3-(4,5-Dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium·bromide research grade

(MTT; Thiazolyl blue)
$C_{18}H_{16}BrN_5S$ ♦ M_r 414.33 ♦ CAS [298-93-1]



EINECS 206-069-5 ♦ WGK 2L ♦ HS 29341000

Detection of dehydrogenases in combination with phenazine methosulfate (1). Terminal electron acceptor in the cycling assay for pyridine nucleotides (2). For colorimetric assay to measure cell activation (3, 4).

Assay (HPLC) min. 98.0 %

References:
1. Schauenstein, E. & Höfler-Bergthaler, E. (1972) Monatsh. Chem. ***103,*** 1271-5
2. Bernofsky, C. & Swan, M. (1973) Anal. Biochem. ***53,*** 542-8
3. Gerlier, D. & Thomasset, N. (1986) J. Immunol. Methods ***94,*** 57-64
4. Hansen, M.B. et al. (1989) J. Immunol. Methods ***119,*** 203-10

Cat.No.	Size
20395.01	250 mg
20395.02	1 g
20395.03	5 g
20395.04	25 g

Dimethyl sulfoxide molecular biology grade

(DMSO)
C_2H_6OS ♦ M_r 78.1 ♦ CAS [67-68-5]

MAK/TRK 160 mg/m³ ♦ EINECS 200-664-3 ♦ WGK 1 ♦ HS 29309099

DNase/RNase not detected.

Assay	min. 99.0 %
MP	18.0 °C
d20 °C	1.1
Water (KF)	max. 0.3 %

Cat.No.	Size
39757.01	50 ml
39757.02	250 ml

Dimethyl sulfoxide research grade

(DMSO)
C_2H_6OS ♦ M_r 78.1 ♦ CAS [67-68-5]

MAK/TRK 160mg/m³ ♦ EINECS 200-664-3 ♦ WGK 1L ♦ HS 29309099

Highly active solvent and pharmaceutical vehicle; for freezing cells. For gradient centrifugation (1). Determination of cysteine and cystine in proteins (2).

Assay	min. 99.0 %
MP	min. 18.0 °C
d20 °C	1.1
Water (KF)	max. 0.3 %

References:
1. Kelly, R.B. & Sinsheimer, R.L. (1967) J. Mol. Biol. ***29,*** 229-36
2. Spencer, R.L. & Wold, F. (1969) Anal. Biochem. ***32***, 185-90

Cat.No.	Size
20385.01	250 ml
20385.02	1 L

N, N-Dimethylbenzylamine

see 14835 Benzyl dimethylamine, page 16

Dimethylformamide molecular biology grade

(DMF; DMFA)
C_3H_7NO ♦ M_r 73.10 ♦ CAS [68-12-2]

DANGER
H226-H312-H319-H332-H360D ♦ Repr. 1B ♦ MAK/TRK 10 ml/m³, 30 mg/m³ ♦ EG-Index 616-001-00-X ♦ GGVSE/ADR 3 III UN2265 ♦ IATA 3 III UN2265 ♦ EINECS 200-679-5 ♦ WGK 1L ♦ HS 29241900

DNase/RNase not detected. Suitable as a solvent for chromogenic substrates used in molecular biology applications.

Assay (GC) min. 99.9 %

Cat.No.	Size
39756.01	250 ml

Dimethylformamide research grade

(DMF; DMFA)
C_3H_7NO ♦ M_r 73.1 ♦ CAS [68-12-2]

DANGER
H226-H312-H319-H332-H360D ♦ Repr. 1B ♦ MAK/TRK 10 ml/m³, 30 mg/m³ ♦ EG-Index 616-001-00-X ♦ GGVSE/ADR 3 III UN2265 ♦ IATA 3 III UN2265 ♦ EINECS 200-679-5 ♦ WGK 1L ♦ HS 29241900

Polar organic solvent with a low evaporation rate, useful for preparing solutions with a variety of hydrophobic organic compounds used in biochemical and molecular biology applications.

Assay (GC)	min. 99.9 %
BP	152 - 154 °C

Cat.No.	Size
20270.03	250 ml

1,9-Dimethylmethylene blue-chloride pure

(3,7-Bis(dimethylamino)-1,9-dimethyldiphenothiazin-5-ium chloride)
$C_{18}H_{22}ClN_3S·0.5\ ZnCl_2$ ♦ M_r 416.05 ♦ CAS [931418-92-7]

WARNING
H319 ♦ WGK 2L ♦ HS 32041300

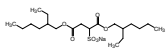
Histological stain with strong metachromic properties (1, 2). Particularly suitable for the quantitation and discrimination of sulfated glycosamino glycans (proteoglycans) (3, 4).

References:
1. Taylor, K.B. & Jefree, G.B. (1969) Histochem. J. ***1***, 199-204
2. Toepfer, K. (1970) Histochemie ***21***, 64-72
3. Farndale, R.W. et al. (1982) Connect. Tissue Res. ***9***, 247-8
4. Klompmakers, A.A. & Hendriks, T. (1986) Anal. Biochem. ***153***, 80-4

Cat.No.	Size
20335.01	1 g

Dioctyl sulfosuccinate·Na-salt research grade

((Bis-2-ethylhexyl)sodium sulfosuccinate; Aerosol OT)
$C_{20}H_{37}O_7S·Na$ ♦ M_r 444.6 ♦ CAS [577-11-7]



DANGER
H302-H315-H318 ♦ EINECS 209-406-4 ♦ WGK 2L ♦ HS 34029090

Detergent; water solubility at 20 °C ca. 1.5 %, at 70 °C ca. 5 %. Suitable for reverse micellar solubilization of enzymes, cell organelles and bacterial cells.

Assay (titr.) min. 98.0 %

References:
1. Bru, R. et al. (1989) Biotechnol. Bioeng. ***34,*** 304-8
2. Kabanov, A.V. et al. (1989) Biochim. Biophys. Acta ***996,*** 147-52
3. Haering, G. et al. (1987) Ann. N.Y. Acad. Sci. ***506,*** 337-44
4. Hochkoeppler, A. et al. (1989) Biotechnol. Bioeng. ***33,*** 1477-81

Cat.No.	Size
20540.02	500 g

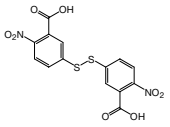
Direct Red 28

see 27215 Congo Red, page 34

L(-)-3,3'-Dithiobis(2-aminopropanoic acid)

see 17880 L-Cystine, page 36

5,5'-Dithiobis(2-nitrobenzoic acid) research grade



(DTNB; Ellman's reagent)
$C_{14}H_8N_2O_8S_2$ ♦ M_r 396.36 ♦ CAS [69-78-3]

WARNING
H315-H319-H335 ♦ EINECS 200-714-4 ♦ WGK 1 ♦ HS 29309099

For qualitative and quantitative determination of sulfhydryl groups.

Assay (titr.)	99.0 - 101.0 %
Molar extinction coefficient ($l\ mol^{-1}\ cm^{-1}$)	13 600 - 14 250

References:
1. Ellman, G.L. (1959) Arch. Biochem. Biophys. ***82,*** 70-7

Cat.No.	Size
20735.02	5 g

Dithioerythritol analytical grade

(DTE; Cleland's reagent; erythro-1,4-Dimercapto-2,3-butanediol)
$C_4H_{10}O_2S_2$ ♦ M_r 154.24 ♦ CAS [6892-68-8]

WARNING
H315-H319-H335 ♦ EINECS 229-998-8 ♦ WGK 3L ♦ HS 29309099

Storage temperature +2 °C to +8 °C

Quantitatively reduces disulfide groups, forming a cyclic disulfide (1, 2, 3). Not hygroscopic.

Assay (titr.)	min. 99.0 %
MP	82 - 86 °C

References:
1. Cleland, W.W. (1964) Biochemistry ***3,*** 480-2
2. Zahler, W.L. & Cleland, W.W. (1968) J. Biol. Chem. ***243,*** 716-9
3. Burstein, Y. & Patchornik, A. (1972) Biochemistry ***11,*** 2939-44

Cat.No.	Size
20697.03	5 g

Dithiothreitol electrophoresis grade

(DTT; Cleland's reagent; threo-1,4-Dimercapto-2,3-butanediol)
$C_4H_{10}O_2S_2$ ♦ M_r 154.25 ♦ CAS [3483-12-3]

WARNING
H302-H315-H319-H335 ♦ EINECS 222-468-7 ♦ HS 29309099

Storage temperature +2 °C to +8 °C

DTT is effective in sample buffers for reducing protein disulfide bonds prior to SDS-PAGE (1). Tested for use in reduced SDS-PAGE. Oxidized DTT max. 0.5 %. Hygroscopic.

Assay (titr.)	min. 99.0 %
MP	40 - 99 °C

References:
1. Cleland, W.W. (1964) Biochemistry ***3***, 480-2

Cat.No.	Size
20711.01	1 g
20711.02	5 g

Dithiothreitol analytical grade

(DTT; Cleland's reagent; threo-1,4-Dimercapto-2,3-butanediol)
$C_4H_{10}O_2S_2$ ♦ M_r 154.25 ♦ CAS [3483-12-3]

WARNING
H302-H315-H319-H335 ♦ EINECS 222-468-7 ♦ WGK 3L ♦ HS 29309099

Storage temperature +2 °C to +8 °C

For quantitative reduction of disulfide groups (1). Oxidized DTT max. 0.5 %. Hygroscopic.

Assay (titr.)	min. 99.0 %
MP	40 - 45 °C

References:
1. Cleland, W.W. (1964) Biochemistry ***3,*** 480-2

Cat.No.	Size
20710.02	1 g
20710.03	5 g
20710.04	25 g

Dithiothreitol molecular biology grade

(DTT; Cleland's reagent; threo-1,4-Dimercapto-2,3-butanediol)
$C_4H_{10}O_2S_2$ ♦ M_r 154.25 ♦ CAS [3483-12-3]

WARNING
H302-H315-H319-H335 ♦ EINECS 222-468-7 ♦ WGK 1 ♦ HS 29309099

Storage temperature +2 °C to +8 °C

DNase/RNase not detected. For quantitative reduction of disulfide groups (1). Oxidized DTT max. 0.5 %. Hygroscopic.

Assay (titr.)	min. 99.0 %
MP	40 - 45 °C

References:
1. Cleland, W.W. (1964) Biochemistry ***3,*** 480-2

Cat.No.	Size
39759.01	1 g
39759.02	5 g
39759.03	25 g

DMF

see 20270 Dimethylformamide, page 39

DMSO

see 20385 Dimethyl sulfoxide, page 39

DNA from fish sperm pure

CAS [100403-24-5]

EINECS 309-566-6 ♦ HS 29349990
Storage temperature +2 °C to +8 °C

Defatted; this material is largely depolymerized; suitable as source for various mono- and oligonucleotides. May be used as blocking reagent after solubilization, shearing and heat denaturation (3).

References:
1. Zamenhoff, S. (1958) Biochem. Prep. ***6,*** 6-12
2. Bonner, J. & Huang, R.C.C. (1963) J. Mol. Biol. ***6,*** 169-74
3. J. Sambrook, E.F. Fritsch, T. Maniatis (1989) Molecular Cloning - A Laboratory Manual, B15

Cat.No.	Size
18580.01	25 g

DNA Molecular Weight Markers

see 39314 SERVA DNA Standard 1 Kbp DNA Ladder lyophilized, page 113

DNADecon

HS 38220000

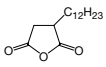
Highly effective decontamination solution for removal of DNA and RNA contamination on surfaces, instruments and laboratory equipment.
DNADecon is ideal for use in decontamination of PCR work places, because it completely destroys and removes DNA molecules from any surface. It can as well be used for decontamination of electrophoresis chambers, pipettes, reaction tubes etc.
DNADecon is ready-to-use, non-alkaline and non-carcinogenic.
Supplied in a spray bottle (250 ml) or as refill (500 ml).

Cat.No.	Size
39810.01	250 ml
39810.02	500 ml

DNase I

see 18535 Deoxyribonuclease I from Bovine Pancreas min. 3000 Kunitz units/mg, page 37

2-Dodecenylsuccinic acid anhydride pract.



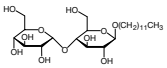
(DDSA; 2-Dodecenylsuccinic anhydride; EPON hardener DDSA)
$C_{16}H_{26}O_3$ ♦ M_r 266.38 ♦ CAS [25377-73-5]

WARNING
H315-H319-H335 ♦ EINECS 246-917-1 ♦ WGK 2 ♦ HS 29171980

Hardener for epoxy resins.

Cat.No.	Size
20755.01	100 g
20755.02	1 kg

Dodecyl-β-D-maltoside research grade



(Lauryl-β-D-maltoside; DDM)
$C_{24}H_{46}O_{11}$ ♦ M_r 510.63 ♦ CAS [69227-93-6]

WGK 1 ♦ HS 34021300
Storage temperature +2 °C to +8 °C

Non-ionic detergent; CMC 0.16-0.19 mM. Especially suitable for the activation of cytochrome C oxidase. Frequently used for the investigation of photosynthetic membranes.

Assay (from C)	min. 99.0 %
[α] 20 °C/D (c=1 % in H_2O)	+46 ° to +50 °

References:

1. Rosevaer, P. et al. (1980) Biochemistry ***19,*** 4108-15
2. Musatov, A. et al. (1990) Biochem. Int. ***21,*** 563-71
3. Dekker, J.P. et al. (1989) FEBS Lett. ***254,*** 150-4
4. Koenig, B. et al. (1989) FEBS Lett. ***257,*** 163-6

Cat.No.	Size
20780.03	1 g

Dodecylsulfate-Na-salt electrophoresis grade

(SDS; Sodium laurylsulfate; Sodium dodecyl sulfate)
$C_{12}H_{25}O_4S{\cdot}Na$ ♦ M_r 288.38 ♦ CAS [151-21-3]

DANGER
H228-H302-H311-H315-H319-H335 ♦ GGVSE/
ADR 4.1 III UN2926 ♦ IATA 4.1 III UN2926 ♦
EINECS 205-788-1 ♦ HS 34029090

CMC (25 °C) 8.1 mM, Na (25 °C) 60 - 62, HLB 40
Anionic detergent
Ultrapure SDS, application proofed quality for all electrophoresis and blotting techniques.

Assay (GC)	min. 99.0 %
A 1cm/10 % in water	
260 nm	max. 0.15
280 nm	max. 0.05

Cat.No.	Size
20771.01	100 g
20771.02	500 g

Dodecylsulfate·Na-salt cryst. research grade

(SDS; Sodium laurylsulfate; Sodium dodecyl sulfate)
$C_{12}H_{25}O_4S{\cdot}Na$ ♦ M_r 288.38 ♦ CAS [151-21-3]

DANGER
H228-H302-H311-H315-H319-H335 ♦ GGVSE/
ADR 4.1 III UN2926 ♦ IATA 4.1 III UN2926 ♦
EINECS 205-788-1 ♦ WGK 2L ♦ HS 34029090

CMC (25 °C) 8.1 mM, Na (25 °C) 60 - 62, HLB 40
Anionic detergent
Useful for protein solubilization, plasmid extraction from bacteria, and to reduce non-specific binding sites on membranes during nucleic acid hybridization.

Assay (GC)	min. 99.5 %
C_{10}- and C_{14}-sulfate (GC)	max.1.0 %
A 1 cm/10 % in water	
260 nm	max. 1.5
280 nm	max. 1.0

Cat.No.	Size
20760.01	100 g
20760.03	250 g
20760.02	1 kg

Dodecylsulfate·Na-salt for biochemistry

(SDS; Sodium laurylsulfate; Sodium dodecyl sulfate)
$C_{12}H_{25}O_4S{\cdot}Na$ ♦ M_r 288.38 ♦ CAS [151-21-3]

DANGER
H228-H302-H311-H315-H319-H335 ♦ GGVSE/
ADR 4.1 III UN2926 ♦ IATA 4.1 III UN2926 ♦
EINECS 205-788-1 ♦ WGK 2L ♦ HS 34029090

CMC (25 °C) 8.1 mM, Na (25 °C) 60 - 62, HLB 40
Anionic detergent for surfactant studies.

Assay (GC)	min. 99.0 %

Cat.No.	Size
20783.01	250 g
20783.02	1 kg

Dodecylsulfate·Na-salt 2 x cryst., analytical grade

(SDS; Sodium laurylsulfate; Sodium dodecyl sulfate)
$C_{12}H_{25}O_4S{\cdot}Na$ ♦ M_r 288.38 ♦ CAS [151-21-3]

DANGER
H228-H302-H311-H315-H319-H335 ♦ GGVSE/
ADR 4.1 III UN2926 ♦ IATA 4.1 III UN2926 ♦
EINECS 205-788-1 ♦ WGK 2L ♦ HS 34029090

CMC (25 °C) 8.1 mM, Na (25 °C) 60 - 62, HLB 40
Anionic detergent
Ultrapure. Useful for protein solubilization, plasmid extraction from bacteria, reduction of non-specific binding sites on membranes during nucleic acid hybridization and electrophoresis.

Cat.No.	Size
20763.01	100 g
20763.02	500 g

Dodecylsulfate·Na-salt in Pellets research grade

(SDS; Sodium laurylsulfate; Sodium dodecyl sulfate; SDS pellets)
$C_{12}H_{25}O_4S{\cdot}Na$ ♦ M_r 288.38 ♦ CAS [151-21-3]

WARNING
H228-H302-H312-H315-H319-H335 ♦ GGVSE/
ADR 4.1 III UN1325 ♦ IATA 4.1 III UN1325 ♦
EINECS 205-788-1 ♦ WGK 2L ♦ HS 34029090

CMC (25 °C) 8.1 mM, Na (25 °C) 60 - 62, HLB 40
Anionic detergent
Ultrapure SDS pressed in small pellets thus avoiding the irritant dust of the powder form. Suitable for electrophoresis, molecular biology and biochemistry.

Assay (titr.)	min 99.5 %
C_{10} and C_{14}- sulfate (GC)	max. 1.0 %
A 1 cm/10 % in water	
260 nm	max. 1.5
280 nm	max. 1.0

Cat.No.	Size
20765.01	100 g
20765.02	250 g
20765.03	1 kg

DOWEX® 1X2 (200-400 mesh) pract.

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	2 % DVB
Capacity	min. 0.6 eq/l
Loss on Drying	70 - 80 %

Cat.No.	Size
41030.01	100 g
41030.02	500 g

DOWEX® 1X2 (200-400 mesh) analytical grade

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	2 % DVB
Capacity	min. 0.6 eq/l
Loss on Drying	70 - 80 %

Cat.No.	Size
41031.01	100 g
41031.02	500 g

DOWEX® 1X8 (20-50 mesh) pract.

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	8 % DVB
Capacity	min. 1.3 eq/l
Loss on Drying	45.0 - 60.0 %

Cat.No.	Size
41080.04	500 g

DOWEX® 1X8 (20-50 mesh) analytical grade

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	8 % DVB
Capacity	1.0 - 1.5 eq/l
Loss on Drying	50 - 60 %

Cat.No.	Size
41081.03	100 g
41081.04	500 g

DOWEX® 1X8 (50-100 mesh) pract.

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	8 % DVB
Capacity	min. 1.2 eq/l
Loss on Drying	43 - 47 %

Cat.No.	Size
41090.02	500 g

DOWEX® 1X8 (50-100 mesh) analytical grade

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	8 % DVB
Capacity	min. 1.2 eq/l
Loss on Drying	45 - 55 %

Cat.No.	Size
41091.02	500 g

DOWEX® 1X8 (100-200 mesh) pract.

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	8 % DVB
Capacity	min. 1.2 eq/l
Loss on Drying	39 - 45 %

Cat.No.	Size
41100.02	500 g

DOWEX® 1X8 (100-200 mesh) analytical grade

HS 39140000

Anion exchanger of type I, strongly basic.

Cross Linkage	8 % DVB
Capacity	ca. 1.2 eq/l
Loss on Drying	39 - 50 %

Cat.No.	Size
41101.01	100 g
41101.02	500 g

DOWEX® 50 WX2 (100-200 mesh) pract.

HS 39140000

Cation exchanger, strongly acidic.

Cross Linkage	2 % DVB
Capacity	min. 0.6 eq/l
Loss on Drying	74 - 82 %

Cat.No.	Size
41520.01	100 g
41520.02	500 g

DOWEX® 50 WX2 (100-200 mesh) analytical grade

HS 39140000

Cation exchanger, strongly acidic.

Cross Linkage	2 % DVB
Capacity	min. 0.6 eq/l
Loss on Drying	74 - 82 %

Cat.No.	Size
41521.01	100 g

DOWEX® 50 WX2 (200-400 mesh) analytical grade

HS 39140000

Cation exchanger, strongly acidic.

Cross Linkage	2 % DVB
Capacity	min. 0.6 eq/l
Loss on Drying	74 - 81 %

Cat.No.	Size
41531.02	500 g

DOWEX® 50 WX8 (100-200 mesh) analytical grade

HS 39140000

Cation exchanger, strongly acidic.

Cross Linkage	8 % DVB
Capacity	min. 1.7 eq/l
Loss on Drying	45 - 55 %

Cat.No.	Size
41621.01	100 g
41621.02	500 g

DPBS

see 47302 Buffer Substance Dulbecco's, page 23

DPN

see 30311 β-Nicotinamide adenine dinucleotide, page 83

dsDNase heat labile, solution

HS: 35079090

Storage Temperature: -15 °C to -25 °C

M_r 47 600

Unique double-strand specific endonuclease, which can be easily inactivated by heat treatment. As it does not digest ssDNA or RNA, it allows to specifically remove dsDNA in the presence of other nucleic acids. The yielding product is oligonucleotides with 5'-phosphates and 3'-hydroxyl termini.
Recombinantly produced in *Pichia pastoris*, specific activity ca. 200 000 units/mg.

- Complete, irreversible inactivation by heat treatment at 5 min at 58 °C, 1 mM DTT, pH ≥ 8
- Decontamination of PCR master mixes
- Removal of genomic DNA from RNA preparations prior to RT-qPCR

Cat.No.	Size
18545.01	250 U

DTE

see 20697 Dithioerythritol, page 40

DTNB

see 20735 5,5'-Dithiobis(2-nitrobenzoic acid), page 40

DTT

see 20711 Dithiothreitol, page 40

DTT

see 20710 Dithiothreitol, page 40

Dummy Plate

HS 39269097

For leak-free buffer compartment. Replaces second gel when only one gel will be run with BlueVertical™ PRiME™.

Cat.No.	Size
BV-104-7	1 piece

Dye 488 Antibody Labelling Kit

HS: 38220000

Dye 488 Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 1 mg per reaction. The green fluorescent dye has an excitation maximum at 494 nm and emission maximum at 520 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 1 or 2 vials dye 488, labelling buffer, empty gel filtration column, purification resin and elution buffer

Cat.No.	Size
59000.01	1 react.
59000.02	2 react.

Dye 488 Micro Antibody Labelling Kit

HS: 38220000

Dye 488 Micro Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 50 - 100 µg per reaction.
The green fluorescent dye has an excitation maximum at 494 nm and emission maximum at 520 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 3 vials dye 488, labelling buffer, 3 purification resin spin columns and 3 collection tubes

Cat.No.	Size
59004.01	3 react.

Dye 550 Antibody Labelling Kit

HS: 38220000

Dye 550 Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 1 mg per reaction.
The red fluorescent dye has an excitation maximum at 550 nm and emission maximum at 565 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 1 or 2 vials dye 550, labelling buffer, empty gel filtration column, purification resin and elution buffer

Cat.No.	Size
59001.01	1 react.
59001.02	2 react.

Dye 550 Micro Antibody Labelling Kit

HS: 38220000

Dye 550 Micro Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 50 - 100 µg per reaction.
The red fluorescent dye has an excitation maximum at 550 nm and emission maximum at 565 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 3 vials dye 550, labelling buffer, 3 purification resin spin columns and 3 collection tubes

Cat.No.	Size
59005.01	3 react.

Dye 645 Antibody Labelling Kit

HS: 38220000

Dye 645 Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 1 mg per reaction.
The far red fluorescent dye has an excitation maximum at 648 nm and emission maximum at 667 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 1 or 2 vials dye 645, labelling buffer, empty gelfiltration column, purification resin and elution buffer

Cat.No.	Size
59002.01	1 react.
59002.02	2 react.

Dye 645 Micro Antibody Labelling Kit

HS: 38220000

Dye 645 Micro Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 50 - 100 µg per reaction.
The far red fluorescent dye has an excitation maximum at 648 nm and emission maximum at 667 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 3 vials dye 645, labelling buffer, 3 purification resin spin columns and 3 collection tubes

Cat.No.	Size
59006.01	3 react.

Dye 770 Antibody Labelling Kit

HS: 38220000

Dye 770 Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 1 mg per reaction.
The near infrared fluorescent dye has an excitation maximum at 774 nm and emission maximum at 790 nm.

- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 1 or 2 vials dye 770, labelling buffer, empty gelfiltration column, purification resin and elution buffer

Cat.No.	Size
59003.01	1 react.
59003.02	2 react.

Dye 770 Micro Antibody Labelling Kit

HS: 38220000

Dye 770 Micro Antibody Labelling Kit offers an efficient and easy method for the fluorescent conjugation of antibodies and molecules containing a primary amino group in the scale 50 - 100 µg per reaction.
The near infrared fluorescent dye has an excitation maximum at 774 nm and emission maximum at 790 nm.

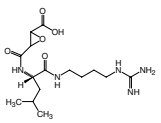
- Ready to use for conjugation
- High brightness and purity of the dye
- Easy and reproducible
- All-included kit

The labelled antibodies are suitable for Western blotting, Fluorescent Microscopy, Flow Cytometry, Immunohistochemistry, Primary Detection, ELISAs, Immunocytochemistry, Indirect FISH.

Content: 3 vials dye 770, labelling buffer, 3 purification resin spin columns and 3 collection tubes

Cat.No.	Size
59007.01	3 react.

E-64 research grade



(trans-Epoxysuccinyl-L-leucylamido-(4-guanidino) butane; Expoxy[L-3-trans-carboxy oxiran-2-carbonyl]-L-Leu-Agmatin)
$C_{15}H_{27}N_5O_5$ ♦ M_r 357.4 ♦ CAS [66701-25-5]

HS 29241900
Storage temperature -15 °C to -25 °C

Inhibitor for papain and other cysteine (thiol) proteases. Effects on metastasis formation in mice (5).

Assay (HPLC) min. 99.0 %

References:

1. Hanada, K. et al. (1978) Agric. Biol. Chem. ***42,*** 523, 529
2. Varughese, K.J. et al. (1989) Biochemistry ***28,*** 1330-2
3. Nakao, H. et al. (1989) Int. J. Biochem. ***21,*** 139-42
4. Jani, J.P. et al. (1992) Oncol. Res. ***4,*** 59-63
5. Leto, G. et al. (1994) In Vivo ***8,*** 231-6

Cat.No.	Size
21100.01	5 mg
21100.02	25 mg

Edamin S

see 48625 Peptone from lactalbumin, page 87

EDTA

see 11278 Ethylenediamine tetraacetic acid, page 46

EDTA-disodium

see 11280 Ethylenediamine tetraacetic acid·Na_2-salt, page 46

EGTA

see 11290 Ethylene glycol bis(2-aminoethylether)-N,N,N‘,N‘-tetra acetic acid, page 46

Egtazic acid

see 11290 Ethylene glycol bis(2-aminoethylether)-N,N,N‘,N‘-tetra acetic acid, page 46

Elastase from porcine pancreas min. 200 U/mg

lyophil. salt-free

(Pancreatopeptidase E)
EC 3.4.21.36 ♦ M_r ca. 25 900 ♦ CAS [39445-21-1]

DANGER
H315-H319-H334-H335 ♦ EINECS 254-453-6 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

For the degradation of proteins and peptides.
Serine proteinase with broad substrate specificity. It preferentially cleaves peptide bonds at the carbonyl end of amino acid residues with small hydrophobic side chains, such as glycine, valine, leucine, isoleucine, and particularly alanine. This specificity explains its unique ability to digest native elastin, which is found in highest concentrations in the elastic fibers of connective tissues. Therefore elastase in combination with other enzymes like trypsin is frequently used to dissociate tissues which contain extensive intercellular fiber networks.
Elastase is also able to digest other proteins such as fibrin, hemoglobin, and casein, but not native collagen and keratin. In the presence of Tris, sodium sulfate or SDS enzyme activity is greatly stimulated.

Unit definition: One unit will hydrolyze one micromole of methoxy succinyl-alanine-alanine-proline-valine-p-nitroanilide per minute at 37 °C and pH 7.5.

References:

1. Naughton, M. A. & Sanger, F. (1961) Biochem. J. ***78,*** 156-63
2. Gertler, A. & Hofmann, T. (1970) Can. J. Biochem. ***48,*** 384-6

Cat.No.	Size
20930.01	10 mg
20930.02	25 mg

Electrode lid with IPG tray, for HPE™ BlueHorizon™

HS 90272000
Contains HPE™ electrode lid with at right angle arranged electrodes and IPG tray with 12 slots capable to hold 7 cm to 24 cm IPG strips. In combination with BluePower™ 6000 IPG power supply, this set turns your HPE™ Blue-Horizon™ System into a 1st dimension IEF device for 2D electrophoresis.

Cat.No.	Size
HPE-ELIPG	1 kit

Electrode Set for BB-SD11

HS 90272000

Replacement electrode set for BlueBlot Semi-Dry Blotter SD 11 (BB-SD11). Will also fit into the base of BlueBlot Semi-Dry Blotter SD 17 (BB-SD17).

Cat.No.	Size
BB-E11	1 piece

Electrode Set for BB-SD17

HS 90272000

Replacement electrode set for BlueBlot Semi-Dry Blotter SD 17 (BB-SD17). Will also fit into the base of BlueBlot Semi-Dry Blotter SD 11 (BB-SD11).

Cat.No.	Size
BB-E17	1 piece

Electrode Wicks standard size

HS 48232000

Filter cardboard, 120 x 6 x 1 mm.

Cat.No.	Size
42988.01	100 pieces

Electrode Wicks long size

HS 48232000

Filter cardboard, 240 x 6 x 1 mm.

Cat.No.	Size
42987.03	100 pieces

Electrode Wicks extra size

HS 48232000

Filter cardboard, 300 x 6 x 1 mm.

Cat.No.	Size
42972.03	100 pieces

Electronic Starter, for SERVA UV-Table CII (UV-CII)

HS 90278017

Cat.No.	Size
UV-CII-ES	1 piece

Ellman's reagent

see 20735 5,5'-Dithiobis(2-nitrobenzoic acid), page 44

Embedding Medium ERL-4221D

(Epoxycyclohexylmethyl-3,4-epoxycyclohexylcarboxylate; Epoxy embedding medium; Spurr Embedding Medium)
$C_{14}H_{20}O_4$ ♦ M_r 252 ♦ CAS [2386-87-0]

WARNING
H317 ♦ EINECS 219-207-4 ♦ WGK 1L ♦ HS 39073000

Diepoxide. Cycloaliphatic epoxy resin. Embedding medium for electron microscopy. Less toxic substitute for the classical Spurr embedding medium ERL 4206.

Epoxy equivalent weight	126 - 135
Viscosity (25 °C)	220 - 250 mPa·s
Density (g/ml)	1.159 - 1.174

Cat.No.	Size
21041.02	250 m

Endoproteinase Glu-C, recombinant sequencing grade

(V8 protease)
3.4.21.19 ♦ CAS [66676-43-5]

HS 35079090
Storage temperature -15 °C to -25 °C

Due to its highly specific cleavage of peptides the serine protease Glu-C (S. aureus V8) is used to produce protein digests for peptide mapping applications or protein identification by peptide mass fingerprinting or MS/MS spectral matching.
The specificity of Glu-C is primarily determined by the buffer pH and composition. Using phosphate buffers (pH 7.8), Glu-C will cleave at both glutamyl and aspartyl bonds. Ammonium bicarbonate buffer (pH 7.8) will lead to a preferential cleavage of glutamyl bonds. The presence of proline residues on the carboxy side of the peptide bond inhibits the cleavage.

- High specificity, purity and stability
- Recombinant - animal origin material free, consistent lot-to-lot quality

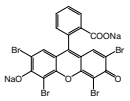
Cat.No.	Size
20984.01	50 µg

Eosin G

see 21005 Eosin Y·Na-salt, page 45

Eosin Y·Na-salt research grade

(Acid Red 87; Eosin Yellowish; Tetrabromo-fluorescein; Eosin G)
C.I.45380 ♦ $C_{20}H_6Br_4O_5 \cdot Na_2$ ♦ M_r 691.9 ♦ CAS [17372-87-1]



HS 29329900

Tested for use as histological stain and as fluorescent indicator (Y = yellowish).

λ max. 0.001 % in water	516 ± 4 nm

Cat.No.	Size
21005.01	25 g

EPO Doping IEF Kit 30S

HS 38220000
Storage temperature -15 °C to -25 °C ✻

Ready-to-use kit for differentiation of natural and recombinant erythropoietin (EPO) in doping controls according to National and World Anti-Doping Agencies.
Kit contains 4 EPO IEF Clean Gels with 30 slots, rehydration additive, SERVALYT™ EPO mix, SERVALYT™ 6 – 8 as cathode buffer, electrode wicks and drying cardboards; suitable for HPE™ BlueTower, HPE™ BlueHorizon™ and HPE™ BlueHorizon™ Multi Deck.

Cat.No.	Size
43389.01	1 kit

Epon 812

see 21045 Glycid ether 100, page 57

EPON accelerator DMP-30

see 36975 2,4,6-Tris(dimethylaminomethyl)phenol, page 150

EPON hardener DDSA

see 20755 2-Dodecenylsuccinic acid anhydride, page 40

EPON hardener MNA

see 29452 Methylnadic anhydride, page 78

Epoxy embedding medium

see 21041 Embedding Medium ERL-4221D, page 45

1,2-Epoxypropane

see 33715 Propylene oxide, page 93

ERL-4206 hardener

see 30812 Nonenylsuccinic anhydride, page 84

ERL-4206 plasticizer

see 18247 D.E.R.® 736, page 36

Ethanol denaturated 96 %

C_2H_6O ♦ M_r 46.07 ♦ CAS [64-17-5]

DANGER
H225-H319 ♦ GGVSE/ADR 3 II UN1170 ♦ IATA 3 II UN1170 ♦ EINECS 200-578-6 ♦ WGK 2 L ♦ HS 22072000

Suitable for biochemical and histochemcal applications, for the preparation of staining and destaining solutions of PAGE gels.

Assay (CTB)	min. 95.0 %
Isopropanol	1 %
Methyl ethyl ketone	1 %
Denatoniumbenzoat	10 ppm
Aldehyde	max. 30 ppm
Acidity	max. 10 ppm
Methanol	max. 1000 ppm
Residue on evaporation	max. 25 ppm

Cat.No.	Size
11096.01	2,5 L
11096.02	5 L

Ethanol undenatured 96 % analytical grade

C_2H_6O ♦ M_r 46.07 ♦ CAS [64-17-5]

DANGER
H225-H319 ♦ MAK/TRK 500 ml/m³, 960 mg/m³ ♦ GGVSE/ADR 3 II UN1170 ♦ IATA 3 II UN1170 ♦ EINECS 200-578-6 ♦ WGK 1 ♦ HS 22071000

Suitable for analytical and biochemical applications.

Assay (GC)	94.0 - 96.0 %
Water (KF)	4.0 - 6.0 %

Cat.No.	Size
11094.01	1 L
11094.02	2,5 L

Ethanol undenatured absolute analytical grade

C_2H_6O ♦ M_r 46.07 ♦ CAS [64-17-5]

DANGER
H225-H319 ♦ MAK/TRK 500 ml/m³, 960 mg/m³ ♦ EG-Index 603-002-00-5 ♦ GGVSE/ADR 3 II UN1170 ♦ IATA 3 II UN1170 ♦ EINECS 200-578-6 ♦ WGK 1L ♦ HS 22071000

Suitable for use in analytical and biochemical applications.

Assay (GC)	min. 99.7 %
Water (KF)	max. 0.2 %

Cat.No.	Size
11093.01	250 ml
11093.02	1 L
11093.03	2,5 L

Ethanol undenatured absolute molecular biology grade

C_2H_6O ♦ M_r 46.07 ♦ CAS [64-17-5]

DANGER
H225-H319 ♦ MAK/TRK 500 ml/m³, 960 mg/m³ ♦ EG-Index 603-002-00-5 ♦ GGVSE/ADR 3 II UN1170 ♦ IATA 3 II UN1170 ♦ EINECS 200-578-6 ♦ WGK 1L ♦ HS 22071000

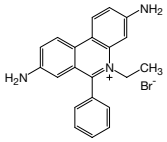
DNase/RNase not detected. Suitable for use in the precipitation of nucleic acids.

Assay	min. 99.7 %
Water (KF)	max. 0.2 %

Cat.No.	Size
39556.01	250 ml
39556.02	1 L
39556.03	2,5 L

Ethidium bromide aqueous solution 1 % w/v

DANGER
H332-H341 ♦ GGVSE/ADR 6.1 III UN2810 ♦
IATA 6.1 III UN2810 ♦ WGK 2 ♦ HS 38220000
Storage temperature +2 °C to +8 °C



Concentration: 10 mg/ml. Suitable for use in staining of DNA after electrophoresis or as counterstain of cell nuclei in histology and cytology.

Cat.No.	Size
21251.01	25 ml

Ethylene glycol analytical grade

(Ethanediol; Glycol)
$C_2H_6O_2$ ♦ M_r 62.07 ♦ CAS [107-21-1]

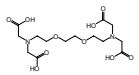
WARNING
H302-H373 ♦ MAK/TRK 10 ml/m³; 26 mg/m³ ♦ EG-Index 603-027-00-1 ♦ EINECS 203-473-3 ♦ WGK 1L ♦ HS 29053100
Used in of antifreeze preparations.

Assay (GC)	min. 99.5 %

Cat.No.	Size
11285.02	1 L

Ethylene glycol bis(2-aminoethylether)-N,N,N‘,N‘-tetra acetic acid analytical grade

(EGTA; Chel-De; Egtazic acid; Ethylene-bis(oxyethylene-nitrilo)-tetraacetic acid)
$C_{14}H_{24}N_2O_{10}$ ♦ M_r 380.35 ♦ CAS [67-42-5]



EINECS 200-651-2 ♦ HS 29225000

High selectivity for Ca^{2+} over Mg^{2+}.

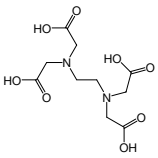
Assay (titr.)	min. 99.0 %

References:
1. Berman, C. (1982) J. Biol. Chem. ***257,*** 1953-7

Cat.No.	Size
11290.01	5 g
11290.02	50 g

Ethylenediamine tetraacetic acid analytical grade

(EDTA; Ethylenedinitrilo-tetraacetic acid)
$C_{10}H_{16}N_2O_8$ ♦ M_r 292.3 ♦ CAS [60-00-4]



WARNING
H319-H332-H373 ♦ EG-Index 607-429-00-8 ♦ EINECS 200-449-4 ♦ WGK 2L ♦ HS 29212900

Ethylenediaminetetraacetic acid (EDTA) chelates metal divalent cations like calcium, magnesium by forming metal-EDTA complexes. EDTA is used in a wide range of applications: as a buffer component in nucleic acid purification and electrophoresis, an inhibtor of enzymes like metalloproteases and nucleases, an anti-bacterial agent and in cleaning products and detergent formulations.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
11278.01	100 g
11278.02	1 kg

Ethylenediamine tetraacetic acid·Na_2-salt molecular biology grade

(Versene disodium; EDTA-disodium)
$C_{10}H_{14}N_2O_8 \cdot Na_2 \cdot 2H_2O$ ♦ M_r 372.3 ♦ CAS [6381-92-6]

EINECS 205-358-3 ♦ WGK 2L ♦ HS 29212900

DNase/RNase not detected.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
39760.01	250 g

Ethylenediamine tetraacetic acid· Na_2-salt, solution, 0.5 M molecular biology grade

WGK 2 ♦ HS 38220000

DNase/RNase not detected. pH (20 °C): 8.0 ± 0.1, 0.5 M solution. Ready-to-use EDTA disodium salt solution, which can be readily diluted into any buffer of choice. Suitable for electrophoresis buffers, protein purification etc.

Composition:

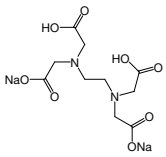
EDTA·Na_2·$2H_2O$ (cat. no. 39760)	186.1 g/l
pH	8.0 ±0.1

Cat.No.	Size
39761.01	100 ml
39761.02	500 ml

Ethylenediamine tetraacetic acid·Na_2-salt analytical grade

(Versene disodium; EDTA-disodium)
$C_{10}H_{14}N_2O_8 \cdot Na_2 \cdot 2H_2O$ ♦ M_r 372.3 ♦ CAS [6381-92-6]

EINECS 205-358-3 ♦ WGK 2L ♦ HS 29212900



Ethylenediaminetetraacetic acid sodium salt (EDTA-Na_2) chelates metal divalent cations like calcium, magnesium by forming metal-EDTA complexes. EDTA is used in a wide range of applications: as a buffer component in nucleic acid purification and electrophoresis, an inhibtor of enzymes like metalloproteases and nucleases, an anti-bacterial agent and in cleaning products and detergent formulations.

Assay (titr.).	min. 99.0 %

Cat.No.	Size
11280.01	100 g
11280.02	1 kg
11280.03	5 kg

N-Ethylmaleimide research grade

(NEM)
$C_6H_7NO_2$ ♦ M_r 125.13 ♦ CAS [128-53-0]

DANGER
H300-H311-H314-H317 ♦ GGVSE/
ADR 6.1 II UN2928 ♦ IATA 6.1 II UN2928 ♦
EINECS 204-892-4 ♦ WGK 3L ♦ HS 29251995
Storage temperature +2 °C to +8 °C

SH-reagent.

Purity (GC)	min. 98.0 %
MP	43 - 46 °C

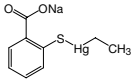
References:
1. Riordan, J. & Vallee, B. (1967) Methods Enzymol. ***11,*** 541-8

Cat.No.	Size
11331.02	5 g

Ethylmercury thiosalicylic acid·Na-salt

research grade, Ph. Eur., USP

(Merthiolate; Thimerosal; Thiomersal)
$C_9H_9HgO_2S{\cdot}Na$ ♦ M_r 404.8 ♦ CAS [54-64-8]



DANGER
H301-H310-H330-H373-H410
♦ MAK/TRK 0.01 ml/m³, 0,1 mg/m³ calculated
as mercury ♦ EG-Index 080-004-00-7 ♦ GGVSE/ADR 6.1 III UN2025 ♦
IATA 6.1 III UN2025 ♦ EINECS 200-210-4 ♦ WGK 3L ♦ HS 28521000

Assay Ph. Eur. (Titration)	97.0 - 101.0 %

Cat.No.	Size
11340.02	25 g
11340.03	100 g

Excellent Gel Kit 7.5 % for 1D SDS PAGE

HS 38220000
Storage temperature +2 °C to +8 °C

The ready-to-use precast horizontal Excellent gels are the ideal tool to run high resolution horizontal SDS PAGE. Up to 25 samples can be run in one gel, sample volume is 15 µl. The thin gel layer and running conditions at temperature-controlled 15 °C enable high resolution of protein bands, fast staining/destaining and much easier handling compared to vertical PAGE. Due to the horizontal method, low buffer consumption is an extra plus in comparison with operating a vertical system. The standard support film is recommended for Coomassie® or silver staining. For fluorescence detection of proteins, gels cast on a non-fluorescence support film are available. The Excellent Gel Kits are the ideal alternative for ExcelGel™ for SDS PAGE from GE. The gels have been developed in Heidelberg in close co-operation with researchers formerly using GE's ExcelGels™ ensuring comparable results.

Contains: 4 film-backed precast 7.5 % T SDS PAGE gels with a Tris/acetate buffer system (size: 260 x 125 x 0.43 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit. For run in horizontal flatbed chambers like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43422.01	1 kit

Excellent Gel Kit 12.5 % for 1D SDS PAGE

HS 38220000
Storage temperature +2 °C to +8 °C

The ready-to-use precast horizontal Excellent gels are the ideal tool to run high resolution horizontal SDS PAGE. Up to 25 samples can be run in one gel, sample volume is 15 µl. The thin gel layer and running conditions at temperature-controlled 15 °C enable high resolution of protein bands, fast staining/destaining and much easier handling compared to vertical PAGE. Due to the horizontal method, low buffer consumption is an extra plus in comparison with operating a vertical system. The standard support film is recommended for Coomassie® or silver staining. For fluorescence detection of proteins, gels cast on a non-fluorescence support film are available. The Excellent Gel Kits are the ideal alternative for ExcelGel™ for SDS PAGE from GE. The gels have been developed in Heidelberg in close co-operation with researchers formerly using GE's ExcelGels™ ensuring comparable results.

Contains: 4 film-backed precast 12.5 % T SDS PAGE gels with a Tris/acetate buffer system (size: 260 x 125 x 0.43 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit. For run in horizontal flatbed chambers like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43421.01	1 kit

Excellent Gel Kit NF 7.5 % for 1D SDS PAGE

HS 38220000
Storage temperature +2 °C to +8 °C

The ready-to-use precast horizontal Excellent gels are the ideal tool to run high resolution horizontal SDS PAGE. Up to 25 samples can be run in one gel, sample volume is 15 µl. The thin gel layer and running conditions at temperature-controlled 15 °C enable high resolution of protein bands, fast staining/destaining and much easier handling compared to vertical PAGE. Due to the horizontal method, low buffer consumption is an extra plus in comparison with operating a vertical system. The gels are cast on a non-fluorescent support film making them suitable for all fluorescent applications. For Coomassie® or silver staining, gels cast on a standard support film are available.
Excellent Gel Kits are the ideal alternative for ExcelGel™ for SDS PAGE from GE. The gels have been developed in Heidelberg in close co-operation with researchers formerly using GE's ExcelGels™ ensuring comparable results.

Contains: 4 film-backed precast 7.5 % T SDS PAGE gels with a Tris/acetate buffer system (size: 260 x 125 x 0.43 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit. For run in horizontal flatbed chambers like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43424.01	1 kit

Excellent Gel Kit NF 12.5 % for 1D SDS PAGE

HS 38220000
Storage temperature +2 °C to +8 °C

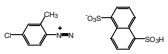
The ready-to-use precast horizontal Excellent gels are the ideal tool to run high resolution horizontal SDS PAGE. Up to 25 samples can be run in one gel, sample volume is 15 µl. The thin gel layer and running conditions at temperature-controlled 15 °C enable high resolution of protein bands, fast staining/destaining and much easier handling compared to vertical PAGE. Due to the horizontal method, low buffer consumption is an extra plus in comparison with operating a vertical system. The gels are cast on a non-fluorescent support film making them suitable for all fluorescent applications. For Coomassie® or silver staining, gels cast on a standard support film are available.
The Excellent Gel Kits are the ideal alternative for ExcelGel™ for SDS PAGE from GE. The gels have been developed in Heidelberg in close co-operation with researchers formerly using GE's ExcelGels™ ensuring comparable results.

Contains: 4 film-backed precast 12.5 % T SDS PAGE gels with a Tris/acetate buffer system (size: 260 x 125 x 0.43 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit. For run in horizontal flatbed chambers like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43423.01	1 kit

Fast Red TR-salt

(Azoic Diazo Component 11; Diazotized 2-amino-5-chlorotoluene·1,5-naphthalene disulfonate; Echtrotsalz TR)



C.I.37085 ♦ $C_7H_6ClN_2 \cdot C_{10}H_7O_6S_2$ ♦ M_r 440.9 ♦ CAS [51503-28-7]

DANGER

H302-H315-H319-H335-H350 ♦ EINECS 257-247-4 ♦ WGK 2L ♦ HS 32041600

Coupling with 1-naphthol.

References:

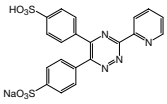
1. Gundlach, E. & Mühlhausen, B. (1980) J. Clin. Chem. Clin. Biochem. ***18,*** 603-10

Cat.No.	Size
21317.01	50 g

Ferrozine® analytical grade

(PDT disulfonate; 3-[2-Pyridyl]-5,6-diphenyl-1,2,4-triazine-4,4´-disulfonic acid·Na-salt)

$C_{20}H_{13}N_4O_6S_2 \cdot Na$ ♦ M_r 492.5 ♦ CAS [69898-45-9]



WARNING

H315-H319-H335 ♦ EINECS 274-196-3 ♦ WGK 1 ♦ HS 29336980

Specific reagent for serum iron determination with high sensitivity. For automated instrumental analysis (1, 2). For determination of acidity of urine and serum (3).

Assay (titr.) min. 98.0 %

Ferrozine = trademark of Diagnostic Chemicals, Canada.

References:

1. Stookey, L.L. (1970) Anal. Chem. ***42,*** 779-81
2. Carter, P. (1971) Anal. Biochem. ***40,*** 450-58
3. Butts, W.C. & Mulvigill, H.J. (1975) Clin. Chem. ***21,*** 1493-7

Cat.No.	Size
21326.02	5 g

Fibronectin (human) lyophil. analytical grade, sterile

(HFN)

M_r ca. 450 000 ♦ CAS [86088-83-7]

EINECS 289-149-2 ♦ WGK - ♦ HS 35040090

Storage temperature +2 °C to +8 °C

Enhances cell-cell and cell-substratum adhesion of transformed cells whereby a significant alteration of cellular morphology towards the normal phenotype is observed (1, 2). Lyophilized from a solution of 0.05 M Tris-HCl, 0.1 M NaCl, pH 7.5 after membrane filtration (0.2 microns). Reconstitute with sterile filtered distilled water. Avoid repeated freezing and thawing.

Purity (SDS electrophoresis) > 90.0 %

References:

1. Ali, I.U. et al. (1977) Cell ***11,*** 115-26
2. Millis, A.J.T. & Hoyle, M. (1978) Nature ***271,*** 668-9
3. ***Review:***
   Kleinman, H.K. et al. (1987) Anal. Biochem. ***166,*** 1-13

Cat.No.	Size
21370.02	1 mg

FICOLL™ 400

M_r 300 000 - 500 000 ♦ CAS [26873-85-8]

WGK 1 ♦ HS 39139000

Suited for preparation of continuous and discontinuous density gradients. For stabilization of membrane-bound particles, isolation of lymphocytes. Dialyzable material (including NaCl) max. 1 %. Better osmotic properties than sucrose, it preserves functional and morphological integrity and does not penetrate biological membranes.
FICOLL™ 400 is a neutral, highly branched, hydrophilic polymer of sucrose which dissolves readily in aqueous solution. Concentrations up to 50 % (w/v), covering a density range up to 1.2 g/ml, can be obtained without exceeding normal osmolarity.

FICOLL = trademark of GE Healthcare companies.

References:

1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (B.15, 6.12)

Cat.No.	Size
21373.01	10 g
21373.02	50 g

1 ml FliQ Column

HS 38220000

Empty 1 ml FPLC chromatography column.
Both ends of the FliQ columns have 10.32 UNF threads which fit all common chromatography instruments. Pack your own resin into these columns. Separate your proteins using an FPLC, HPLC, low pressure pump or a syringe. Use your own resins or use our own high capacity, high flow rate resins e.g. Protein A Agarose, Protein G Agarose, Ni-Superflow, Resin.

Specifications
Bead volume: 1 ml resin
Simple packing procedure
Universal 10.32 UNF threads
Compatible with FPLC & HPLC
Flow rate: 0.5 to 2 ml/min
Stability: pH 2 - 14
Max. pressure: 70 psi (5 bar)
10.32 packing connector sold separately (cat. no. 42282.01)

Cat.No.	Size
42278.01	1 piece

5 ml FliQ Column

HS 38220000

Empty 5 ml FPLC chromatography column.
Both ends of the FliQ columns have 10.32 UNF threads which fit all common chromatography instruments. Pack your own resin into these columns. Separate your proteins using an FPLC, HPLC, low pressure pump or a syringe. Use your own resins or use our own high capacity, high flow rate resins e.g. Protein A Agarose, Protein G Agarose, Ni-Superflow, Resin.

Specifications
Bead volume: 5 ml resin
Simple packing procedure
Universal 10.32 UNF threads
Compatible with FPLC & HPLC
Flow rate: 0.5 to 2 ml/min
Stability: pH 2 - 14
Max. pressure: 42 psi (3 bar)
10.32 packing connector sold separately (cat. no. 42282.01)

Cat.No.	Size
42279.01	1 piece

10 ml FliQ Column

HS 38220000

Empty 10 ml FPLC chromatography column.
Both ends of the FliQ columns have 10.32 UNF threads which fit all common chromatography instruments. Pack your own resin into these columns. Separate your proteins using an FPLC, HPLC, low pressure pump or a syringe. Use your own resins or use our own high capacity, high flow rate resins e.g. Protein A Agarose, Protein G Agarose, Ni-Superflow, Resin.

Specifications
Bead volume: 10 ml resin
Simple packing procedure
Universal 10.32 UNF threads
Compatible with FPLC & HPLC
Flow rate: 0.5 to 2 ml/min
Stability: pH 2 - 14
Max. pressure: 42 psi (3 bar)
10.32 packing connector sold separately (cat. no. 42282.01)

Cat.No.	Size
42280.01	1 piece

20 ml FliQ Column

HS 38220000

Empty 20 ml FPLC chromatography column.
Both ends of the FliQ columns have 10.32 UNF threads which fit all common chromatography instruments. Pack your own resin into these columns. Separate your proteins using an FPLC, HPLC, low pressure pump or a syringe. Use your own resins or use our own high capacity, high flow rate resins e.g. Protein A Agarose, Protein G Agarose, Ni-Superflow, Resin.

Specifications
Bead volume: 20 ml resin
Simple packing procedure
Universal 10.32 UNF threads
Compatible with FPLC & HPLC
Flow rate: 0.5 to 2 ml/min
Stability: pH 2 - 14
Max. pressure: 42 psi (3 bar)
10.32 packing connector sold separately (cat. no. 42282.01)

Cat.No.	Size
42281.01	1 piece

Floater for Xpress Micro Dialyzer for 1 cartridge

The floater consists of high-quality PE foam and carries the Micro Dialyzer ideally in the buffer solution.

Cat.No.	Size
46139.01	1 piece

Fluorescence Gel Imager

HS 90278017

Bio-1000F is an innovative, user-friendly and cost-effective fluorescence gel imager that integrates image capture, gel preview, and gel extraction essential for routine nucleic acid and protein gel electrophoresis. With the combination of high-sensitivity CCD system and Blue-LED illuminators, Bio-1000F is compatible with all EtBr-alternative fluorescent stain and provides the publication-quality image up to 0.04 ng per band, significantly enhancing the fluorescent signal expression over other gel documentation systems dependent on UV and Blue-LED light sources. Moreover the scanner allows to detect proteins pre-labelled with SERVA Lightning Red and other fluorescent dyes that are excitated with blue light and emitting above 520 nm with a sensitivity of about 1 ng protein/band (for SERVA Lightning Red).
Incorporating removable filter plate and intuitive MiBioFluo software interface, users can visualize banding pattern and conduct gel extraction directly on Bio-1000F for more convenient operation without movement between trans-illuminator and gel imager. The compact design especially enables Bio-1000F to fit in crowded laboratory space. Bio-1000F features an integrated, environmental friendly, and ultra-sensitive gel imager for researchers, dedicated to improve the laboratory safety and gel electrophoresis process efficiency.

Cat.No.	Size
BIO-1000F	1 piece

Fluorescence labelling

see 43402 SERVA PRiME™ Lightning Red page 120

Fluorescence labelling

see 43400 SERVA HPE™ Lightning Red, page 114

Fluorescence staining

see 43386 SERVA Purple, page 121

Fluorescence staining

see 35092 SERVA ProteinStain Fluo-Y, page 121

Fluorobind Membrane, surface PVDF

Pore size 0.2 µm, format: 25 cm x 3 m

HS 39219090

Fluorobind membranes are based on PVDF-type chemistry and show an excellent protein binding capacity. They are not only suitable for all standard applications in protein analysis, but as well for special applications like fluorescence detection and protein sequencing. The pore size of 0.2 µm is ideal for blotting of proteins of lower molecular weight and peptides, but can as well be used for larger proteins. The membranes feature a high sensitivity with low background in all common detection systems. The high mechanical stability facilitates handling and allows multiple stripping of the membrane and harsh washing conditions.

Cat.No.	Size
42571.01	1 roll

Fluoromount for microscopy

WARNING
H226-H315-H319-H335-H411 ♦ GGVSE/
ADR 3 III UN1866 ♦ IATA 3 III UN1866 ♦ WGK 2 ♦

HS 38220000
Storage temperature +2 °C to +8 °C

Non-fluorescent mounting medium for microscopy, based on polyacrylate in xylene.

Refractive index (20 °C) 1.454 - 1.457

References:
1. Gurr, E. (1951) J.R. Nav. Med. Serv. ***37***, 133-40
2. De Jong, J.H. (1978) Stain Technol. ***53***, 169-72

Cat.No.	Size
21644.01	50 ml

Fluoromount W for microscopy, aqueous solution

WGK 2S ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Non-fluorescent mounting medium for microscopy. Ideal for F.I.T.C.

Cat.No.	Size
21634.01	50 ml

FocusGel 3-10 Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 3-10.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface. Samples are applied to the gel using applicator strips.

Cat.No.	Size
43327.01	5 gels

FocusGel 3-10 24S Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 3-10, 24 slots for 25 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

Cat.No.	Size
43335.01	5 gels

FocusGel 3-7 Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 3-7.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface. Samples are applied to the gel using applicator strips.

Cat.No.	Size
43328.01	5 gels

FocusGel 3-7 24S Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 3-7, 24 slots for 25 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

Cat.No.	Size
43387.01	5 gels

FocusGel 4-5 24S Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 4-5, 24 slots for 25 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

Cat.No.	Size
43332.01	5 gels

FocusGel 4-6 24S Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 4-6, 24 slots for 25 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

Cat.No.	Size
43334.01	5 gels

FocusGel 6-11 24S Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 6-11, 24 slots for 25 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

Cat.No.	Size
43329.01	5 gels

FocusGel 6-11 40S Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 6-11, 40 slots for 12 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

Cat.No.	Size
43333.01	5 gels

FocusGel 6-9 24S HEM Size: 250 x 115 x 0.65 mm

HS 38220000

Ready-to-use horizontal gels for IEF, pH 6-9, 24 slots for 25 µl.
0.65 mm thick precast polyacrylamide gel, bound to GEL-FIX™ support film for isoelectric focusing. The gels are non-toxic, because catalysts and other non-polymerized substances like acrylamide monomers are removed from the matrix. They contain a special SERVALYT™ cocktail designed to achieve an optimal pH gradient. Electrode solutions and electrode strips are not required, the electrodes are placed directly on the gel surface.

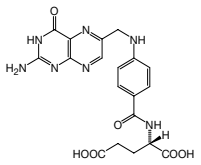
Cat.No.	Size
43330.01	5 gels

Folic acid cryst. research grade, Ph. Eur.

(Pteroylmonoglutamic acid; Folsäure)
$C_{19}H_{19}N_7O_6$ ♦ M_r 441.4 ♦ CAS [59-30-3]

EINECS 200-419-0 ♦ WGK 1L ♦ HS 29362900

Assay (HPLC) 96.0 - 102.0 %



Cat.No.	Size
21700.02	25 g

Formic acid 99 % for LC-MS

CAS [64-18-6]

DANGER
H226-H302-H314-H331 ♦ EG-Index 607-001-00-0 ♦ GGVSE/ADR 8 II UN1779 ♦ IATA 8 II UN1779 ♦ EINECS 200-579-1 ♦ WGK 1 ♦ HS 29151100

Additive for eluent phase for LC-MS.

Assay (acidimetric)	min. 99.0 %
Refractive index (20 °C)	1.3709 – 1.3719
Residue on evaporation	max. 10 ppm

Transmittance

260 nm	min. 20 %
270 nm	min. 85 %

Metal Compounds

Al	max. 0.05 ppm
Mg	max. 0.1 ppm
Fe	max. 0.2 ppm
Ca	max. 0.2 ppm
K	max. 0.1 ppm
Na	max. 0.5 ppm

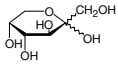
Cat.No.	Size
45640.01	50 ml
45640.02	10 x 1 ml

D-Fructose research grade, Ph. Eur.

(Levulose)
$C_6H_{12}O_6$ ♦ M_r 180.2 ♦ CAS [57-48-7]

EINECS 200-333-3 ♦ WGK 1 ♦ HS 17025000

[α] 20 ° C/D (c=10 % in water) -93.5 to -91.0 °C

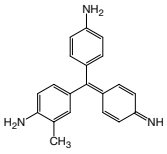


Cat.No.	Size
21830.02	1 kg

Fuchsin acid pure

(Acid Violet 19; Rubin S; Fuchsin trisulfonate)
C.I. 42685 ♦ $C_{20}H_{17}N_3Na_2O_9S_3$ ♦ M_r 585.5 ♦
CAS [3244-88-0]

WGK 2L ♦ HS 32041200



Fuchsin acid is used for staining connective tissues in histological sections with trichrome staining acc. to Mallory and van Gieson and as indicator pH 12 - 14.

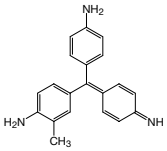
λmax. 0.001 % in H_2O 546 ±4 nm

Cat.No.	Size
34597.01	25 g

Fuchsin basic pure

(Basic Violet 14)
C.I.42510 ♦ CAS [632-99-5]

DANGER
H350 ♦ Carc. 1B ♦ EINECS 211-189-6 ♦
HS 32041300



Mixture of homologues of parafuchsin.

λmax. 0.0001 % in 50 % Ethanol 552 ± 4 nm

Cat.No.	Size
21916.02	25 g

Fungicidin

see 29870 Nystatin min. 4 400 units/mg, page 85

G 418 solution sterile filtered

HS 38220000
Storage temperature -15 °C to -25 °C

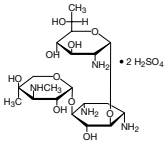
Stock solution, for cell culture, biochemistry and molecular biology.
Formulated to contain 50 mg/ml G 418 base in deionized water.
50 mg G 418 base are approx. 70 mg G 418 sulfate (based on dry weight).
The working concentration has to be established for every cell type.
Bacteria and algae require 5 µg/ml or less while animal cells may require 300 - 500 µg/ml.
G 418 is an aminoglycoside antibiotic from *Micromonospora rhodorangea*. Used for the selection and maintenance of eukaryotic cells expressing the neomycin resistance gene (neo). G418 blocks polypeptide synthesis by inhibiting the elongation step. It is similar in structure to gentamycin B1 but active against both bacteria and eukaryotes.

Cat.No.	Size
47995.01	20 ml

G 418 sulfate

(Geneticin®)
$C_{20}H_{40}N_4O_{10}·2H_2SO_4$ ♦ M_r 692.7 ♦ CAS [108321-42-2]

DANGER
H317-H334 ♦ WGK 3 ♦ HS 29419000



Aminoglycoside antibiotic from *Micromonospora rhodorangea.* Used for the selection and maintenance of eukaryotic cells expressing the neomycin resistance gene (neo). G418 blocks polypeptide synthesis by inhibiting the elongation step. It is similar in structure to gentamycin B1 but active against both bacteria and eukaryotes.

Potency min. 650 µg/mg

Geneticin = trademark of LTI.

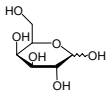
References:

1. Southern, P.J. & Berg, P. (1982) J. Mol. Appl. Genetics ***1,*** 327-41
2. Bar-Nun, S. et al. (1983) Biochim. Biophys. Acta. ***741***, 123-7
3. Hadfield, C. et al. (1990) Curr. Genet. ***18***, 303-13
4. Wang, X. et al. (1996) Biotechnol. Bioeng. ***49***, 45-51
5. Kunik, T. et al. (2001) PNAS ***98***, 1871-6
6. D'Artagnan Villalba, J. et al. (2007) Microbiology ***153***, 3852-63
7. Gietz, R.D. & Schiestl, R.H. (2007) Nature Protocols ***2***, 31-4

Cat.No.	Size
49418.03	1 g

D-Galactose research grade

$C_6H_{12}O_6$ ♦ M_r 180.16 ♦ CAS [59-23-4]



EINECS 200-416-4 ♦ WGK 1 ♦ HS 29400000

Assay (HPLC)	min. 98.0 %
MP	165 - 172 °C
[α] 20 °C/D (c=10 % in water)	+ 78 ° to + 81.5 °

Cat.No.	Size
22020.01	100 g
22020.02	500 g

Gaskets 0.5 Size 264 x 126 mm

HS 39269097

Silicone, U-shaped, 0.5 mm thick, for cuvette techniques.

Cat.No.	Size
42929.01	6 pieces

Gaskets 1.0 Size 264 x 126 mm

HS 39269097

Silicone, U-shaped, 1.0 mm thick, for cuvette techniques.

Cat.No.	Size
42930.01	6 pieces

GE 100

see 21045 Glycid ether 100, page 57

GEL-FIX™ for PAG Size: 245 mm x 125 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

GEL-FIX = trademark of SERVA

Cat.No.	Size
42980.01	36 sheets

GEL-FIX™ for PAG Size: 260 mm x 125 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42999.01	36 sheets

GEL-FIX™ for PAG Size: 260 mm x 203 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42961.01	36 sheets

GEL-FIX™ for PAG Size: 265 mm x 125 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42993.01	36 sheets

GEL-FIX™ for PAG Size: 265 mm x 193 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42983.01	36 sheets

GEL-FIX™ for PAG Size: 50 m x 125 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42966.01	1 roll

GEL-FIX™ for PAG Size: 50 m x 193 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42968.01	1 roll

GEL-FIX™ for PAG Size: 200 m x 193 mm

HS 39206300

Supporting film for casting of polyacrylamide gels; 0.18 mm polyester film, activated on both sides to bind polyacrylamide gels.

Cat.No.	Size
42996.01	1 roll

GEL-FIX™ for Agarose Size: 80 mm x 125 mm

HS 39206300

Supporting film for casting of agarose gels. 0.18 mm polyester film, activated on both sides to bind agarose gel layers covalently.

GEL-FIX is a trademark of SERVA.

Cat.No.	Size
42998.01	36 sheets

GEL-FIX™ for Agarose Size: 125 mm x 125 mm

HS 39206300

Supporting film for casting of agarose gels. 0.18 mm polyester film, activated on both sides to bind agarose gel layers covalently.

Cat.No.	Size
42997.01	36 sheets

GEL-FIX™ for Agarose Size: 258 mm x 125 mm

HS 39206300

Supporting film for casting of agarose gels. 0.18 mm polyester film, activated on both sides to bind agarose gel layers covalently.

Cat.No.	Size
42982.01	36 sheets

GEL-FIX™ for Agarose Size: 265 mm x 125 mm

HS 39206300

Supporting film for casting of agarose gels. 0.18 mm polyester film, activated on both sides to bind agarose gel layers covalently.

Cat.No.	Size
42981.01	36 sheets

GEL-FIX™ Covers Size: 245 mm x 125 mm

HS 39206300

Film for covering gel surfaces; 0.075 mm polyester film, non-binding, suitable for polyacrylamide and agarose gels.

GEL-FIX is a trademark of SERVA.

Cat.No.	Size
42957.01	36 sheets

GEL-FIX™ Covers Size: 260 mm x 203 mm

HS 39206300

Film for covering gel surfaces; 0.075 mm polyester film, non-binding, suitable for polyacrylamide and agarose gels.

Cat.No.	Size
42971.01	36 sheets

GEL-FIX™ Covers Size: 265 mm x 125 mm

HS 39206300

Film for covering gel surfaces; 0.075 mm polyester film, non-binding, suitable for polyacrylamide and agarose gels.

Cat.No.	Size
42970.01	36 sheets

GEL-FIX™ Covers Size: 265 mm x 193 mm

HS 39206300

Film for covering gel surfaces; 0.075 mm polyester film, non-binding, suitable for polyacrylamide and agarose gels.

Cat.No.	Size
42969.01	36 sheets

GEL-FIX™ Covers Size: 280 mm x 125 mm

HS 39206300

Film for covering gel surfaces; 0.075 mm polyester film, non-binding, suitable for polyacrylamide and agarose gels.

Cat.No.	Size
42995.01	36 sheets

2D Gel DALT*six* NF 12.5 % Kit

HS 38220000

6 gels + buffer kit for ETTAN DALT*six*. 1 mm thick, 26 x 20 cm non-fluorescent gel support.

Cat.No.	Size
43313.01	1 kit

2D Gel DALT*six* NF 10 -15 % Kit

HS 38220000

6 gels + buffer kit for ETTAN DALT*six*. 1 mm thick, 26 x 20 cm non-fluorescent gel support.

Cat.No.	Size
43314.01	1 kit

2D Gel DALT*six* 12.5 % Kit

HS 38220000

6 gels + buffer kit for ETTAN DALT*six*. 1 mm thick, 26 x 20 cm standard gel support.

Cat.No.	Size
43317.01	1 kit

2D Gel DALT*six* 10 -15 % Kit

HS 38220000

6 gels + buffer kit for ETTAN DALT*six*. 1 mm thick, 26 x 20 cm standard gel support.

Cat.No.	Size
43318.01	1 kit

2D Gel DALT*twelve* NF 12.5% Kit

HS 38220000

12 gels + buffer kit for ETTAN DALT*twelve*. 1 mm thick, 26 x 20 cm non-fluorescent gel support.

Cat.No.	Size
43315.01	1 kit

2D Gel DALT*twelve* NF 10 -15 % Kit

HS 38220000

12 gels + buffer kit for ETTAN DALT*twelve*. 1 mm thick, 26 x 20 cm non-fluorescent gel support

Cat.No.	Size
43316.01	1 kit

2D Gel DALT*twelve* 12.5 % Kit

HS 38220000

12 gels + buffer kit for ETTAN DALT*twelve*. 1 mm thick, 26 x 20 cm standard gel support.

Cat.No.	Size
43319.01	1 kit

2D Gel DALT*twelve* 10 -15 % Kit

HS 38220000

12 gels + buffer kit for ETTAN DALT*twelve*. 1 mm thick, 26 x 20 cm standard gel support.

Cat.No.	Size
43320.01	1 kit

Gelatin Ph. Eur.

CAS [9000-70-8]

EINECS 232-554-6 ♦ WGK 1 ♦ HS 35030010

Special quality for bacteriology. A 5 % solution liquefies at 25 - 30 °C and begins to set at 19 - 25 °C.

Cat.No.	Size
22151.02	500 g

Gelatin capsules No. 0 for electron microscopy

HS 35030010

Used as an embedding mold for water miscible resins, or resins which need to be cured by transmitted light.

Volume	0.7 cm^3
Length	21.8 mm
Diameter	7.7 mm

Cat.No.	Size
43520.02	500 pieces

Gelatin, liquid

M_r ca. 60 000 ♦ CAS [9000-70-8]

HS 35030080

From fish skin. Solids content 44.0 - 46.0 %. Contains methyl-/propyl-PHB as preservative. Specially prepared and purified gelatin. Supplied as a pourable liquid. Completely water soluble, even at room temperature and at high concentrations. Acts as a protective colloid.

Cat.No.	Size
22156.01	100 ml

Gelfiltration Columns

see 42130 CentriPure MINI Spin Columns Desalt Z-25, page 26

Gelpool

HS 35030080

Cat.No.	Size
HPE-A24	1 piece

Gelrite®

(Agar Substitute; K9A-40; Gellan-Gum)
CAS [71010-52-1]

EINECS 275-117-5 ♦ WGK 1 ♦ HS 39131000

Highly-purified polysaccharide produced by bacteria. Useful alternative to agar for the in vitro culture of many plants and in microbiological culture media.
High salt concentrations increase gelling temperature and polymerisation is enhanced in the presence of bivalent cations.

- Yields very clear gels
- Consistent quality from lot to lot
- Economical, because only about half the amount of agar is required
- Reduced gel preparation time
- Stable at high temperature and withstands repeated autoclaving

Gelrite = registered trademark of Merck & Co., Inc. USA

References:

1. Shungu, D. et al. (1983) Appl. Environm. Microbiol. ***46,*** 840-5
2. Sanderson, G. & Clark, R. (1983) Food Technology ***37,*** 63-70

Cat.No.	Size
22168.01	250 g
22168.02	1 kg

Geneticin®

see 49418 G 418, page 51

Gentamycin Solution sterile filtered

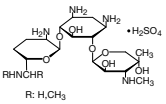
DANGER
H317-H334-H361D ♦ WGK 1 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Formulated to contain 50 mg/ml gentamycin base in deionized water.
50 mg gentamycin base correspond to approx. 50 000 units of gentamycin and are approx. 80 mg gentamycin sulfate.
Gentamycin is an aminoglycoside antibiotic complex from *Micromonospora purpurea* and consists of closely related compounds: gentamycin C1, C1a, C2, C2a and C2b. Inhibits bacterial protein synthesis by binding to the ribosomal 30S subunit and causing misreading of mRNA (in a similar way as streptomycin).
Broad spectrum antibiotic which inhibits growth of many gram positive and gram negative bacteria including strains which are resistant to chloramphenicol, kanamycin or tetracycline. Frequently used in cell culture, often in combination with amphotericin B, nystatin or penicillin G.

Cat.No.	Size
47991.01	20 ml

Gentamycin sulfate research grade, Ph. Eur.

(Gentamicin sulfate)
CAS [1405-41-0]



DANGER
H317-H334-H361 ♦ EINECS 215-778-9 ♦
WGK 1 ♦ HS 29419000

Min. 590 U/mg. Aminoglycoside antibiotic complex from *Micromonospora purpurea*.
Consists of closely related compounds: gentamycin C_1, C_{1a}, C_2, C_{2a} and C_{2b}. Inhibits bacterial protein synthesis by binding to the ribosomal 30S subunit and causing misreading of mRNA (in a similar way as streptomycin). Broad spectrum antibiotic which inhibits growth of many gram positive and gram negative bacteria including strains which are resistant to chloramphenicol, kanamycin or tetracycline. Frequently used in cell culture, often in combination with amphotericin B, nystatin or penicillin G (1,3).

References:

1. Watts, J.W. & King, J.M. (1973) Planta ***113***, 271-7
2. Cox, D. et al. (1977) in: Sammes, P.G. (ed.) Topics in antibiotics chemistry Vol. ***I*** Chichester: Horwood, pp. 1-90
3. Eichholtz, D.A. et al. (1979) Plant Physiol. ***63***, Abstr. 753
4. Lancini, G. & Parenti, F. (1982) Antibiotics; Springer, New York
5. Nakamura, T. et al. (1991) J. Biol. Chem. ***266***, 19432-7
6. Stubbs, A.C. et al. (2001) Nature Medicine ***7,*** 625-9
7. Manevich, Y. et al. (2002) PNAS ***99***, 11599-604
8. Richard, J.P. et al. (2005) J. Biol. Chem. ***280***, 15300-6

Cat.No.	Size
22185.01	1 g
22185.02	5 g
22185.03	25 g

Gentian Violet 10B

see 27335 Crystal Violet, page 35

GermDecon

DANGER
H225-H319-H336 ♦ GGVSE/ADR 3 II UN1219 ♦
IATA 3 II UN1219 ♦ HS 38089490

Wide disinfectant for instruments and surfaces.
To avoid cross-contamination or infection, disinfection of work places and instruments, especially in laboratories working with biological samples, is mandatory.
GermDecon is an isopropyl alcohol based, non-corrosive and non-carcinogenic solution which can be easily sprayed on all surfaces without leaving any traces.
It is among others active against: *Bacillus subtilis, Candida albicans, Clostridium, Coliforms, E. coli, Enterococcus faecalis, Listeria, MRSA, Pseudomonas aeruginosa, Proteus mirabilis, Salmonella, Staphylococcus aureus, Streptococcus pyogenes* and *fungi.*
Supplied in a spray bottle (750 ml) or as refill (1000 ml).

Cat.No.	Size
34207.01	750 ml
34207.02	1.000 ml

Glacial acetic acid

see 45633 Acetic acid 100 %, page 2

Glass Plate, Notched 3.0 mm, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

For BlueVertical™ PRiME™ Casting Stand BV-104-CS.

Cat.No.	Size
BV-GP-N	4 pieces

Glass Plate, Plain 3.0 mm, with 1 mm Spacer, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

For BlueVertical™ PRiME™ Casting Stand BV-104-CS.

Cat.No.	Size
BV-GP-1.0	4 pieces

Glass Plate, Plain 3.0 mm, with 1.5 mm Spacer, for BlueVertical™ PRiME™ Casting Stand

HS 90272000

For BlueVertical™ PRiME™ Casting Stand BV-104-CS.

Cat.No.	Size
BV-GP-1.5	4 pieces

Glass Plates

HS 70031990

Size: 265 x 128 x 3 mm, supports for gel sheets for casting of horizontal gels.

Cat.No.	Size
42952.01	4 pieces

Glass wool, silanized research grade

WARNING
H315-H319-H335 ♦ HS 70199000

A very soft material for plugging columns in gas and liquid chromatography.

Cat.No.	Size
22367.01	10 g
22367.03	50 g

γ-Globulin bovine

M_r 150000 ♦ CAS [9007-83-4]

EINECS 232-706-1 ♦ WGK 1 ♦ HS 30021091
Storage temperature +2 °C to +8 °C

Cohn-Fraction II. Highly purified. Soluble in saline and standard buffers. Suitable to reduce non-specific adsorption of antibody in immunoassay systems. Starting material for the isolation of IgG subclasses.

Assay (CAF)	96.0 - 100.0 %
pH (7 % solution)	6.8 - 7.2
Moisture (KF)	max. 5.0 %

Cat.No.	Size
22550.01	5 g
22550.02	25 g

α-D-Glucopyranosyl-α-D-glucopyranoside

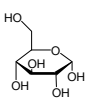
see 36770 D-Trehalose, page 149

2-O-β-D-Glucopyranosyl-α-D-glucose

see 35208 α-Sophorose, page 137

α-D-Glucose anhydrous analytical grade

(Dextrose; α-D-Glucopyranose)
$C_6H_{12}O_6$ ♦ M_r 180.16 ♦ CAS [50-99-7]



EINECS 200-075-1 ♦ WGK 1L ♦ HS 17023050

Assay (titr.)	min. 99.5 %
Water (loss on drying)	max. 0.5 %

Cat.No.	Size
22700.01	100 g
22700.02	1 kg

α-D-Glucose monohydrate analytical grade, Ph. Eur.

(Dextrose)
$C_6H_{12}O_6 \cdot H_2O$ ♦ M_r 198.2 ♦ CAS [14431-43-7]

EINECS 200-075-1 ♦ WGK 1L ♦ HS 17023050

For biochemistry, microbiology and cell culture.

[α] 20 °C/D	+52.5° to +53.3°
Water (KF)	7.0 - 9.5 %

Cat.No.	Size
22720.01	1 kg
22720.02	10 kg

Glucose-6-phosphate dehydrogenase from yeast ca. 140 U/mg protein suspension

(G6P-DH)
EC 1.1.1.49 ♦ M_r ca. 102 000 ♦ CAS [9001-40-5]

EINECS 232-602-6 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

In 3.2 M ammonium sulfate; pH 6.0.
1 mg corresponds to approx. 0.2 ml.

Unit definition: 1 U catalyzes the oxidation of 1 µmole glucose-6-phosphate per minute at 25 °C, pH 7.8 in the presence of $NADP^+$ (equivalent to the reduction of 1 µmol $NADP^+$ per minute) (1).

Extraneous activities: 6-PGDH, PGluM each 0.01 %; hexokinase max. 0.02 %; glutathione reductase max. 0.05 %; PGI max. 0.002 %; creatine kinase max. 0.001 %.

References:
1. Bergmeyer, H.U. (1983) Methods of Enzymatic Analysis, 3rd Ed.Vol. ***2,*** p. 202-3

Cat.No.	Size
22820.01	1 mg

Glucose oxidase from *Aspergillus niger* min. 220 U/mg lyophil.

EC 1.1.3.4 ♦ M_r ca. 160 000 ♦ CAS [9001-37-0]

DANGER
H334 ♦ EINECS 232-601-0 ♦ WGK 1L ♦ HS 35079090
Storage temperature -15 °C to -25 °C ✻

Glucose oxidase is used in the enzymatic determination of D-glucose in solution. Glucose oxidase oxidizes β-D-glucose to D-gluconolactate and hydrogen peroxide. Horseradish peroxidase is then used as the coupling enzyme for glucose determination. Although glucose oxidase is specific for β-D-glucose, solutions of D-glucose can be quantified as α-D-glucose will mutorotate to β-D-glucose as the β-D-glucose is consumed by the enzymatic reaction.
Unit definition: 1 U catalyzes the oxidation of 1 µmole glucose to glucuronic acid per minute at 25 °C, pH 7 coupled with peroxidase and o-dianisidine (2).

References:
1. Tsuge, H. & Mitsuda, H. (1973) J. Biochem. (Tokyo) ***73,*** 199-206
2. Kunst, A. et al. (1984) in Methods of Enzymatic Analysis (Bergmeyer, H.U., ed.) 3rd ed. Vol. ***6,*** 178-85
3. Pazur, J.H. (1966) in Methods in Enzymology (Colowick, S.P. & Kaplan, N.O., eds.) Vol. ***IX***, 82-7
4. O'Malley, J.J. & Weaver, J.L. (1972) Biochemistry ***11***, 3527-321

Cat.No.	Size
22739.02	500 mg

Glucose oxidase from *Aspergillus niger* min. 220 U/mg
lyophil.

(GOD)
EC 1.1.3.4 ♦ M_r ca. 160 000 ♦ CAS [9001-37-0]

DANGER
H334 ♦ EINECS 232-601-0 ♦ WGK 1L ♦ HS 35079090
Storage temperature -15 °C to -25 °C ✻

Glucose oxidase is used in the assay of D-glucose (1). Ca. 300 U/mg protein.

Unit definition: 1 U catalyzes the oxidation of 1 µmole glucose to glucuronic acid per minute at 25 °C, pH 7 coupled with peroxidase and o-dianisidine (1).

Extraneous activities: Amylase, saccharase and maltase less than 0.05 %; GOD/catalase min. 2000.

References:
1. Kunst, A. et al. (1984) Methods of Enzymatic Analysis (Bergmeyer, H.U., ed.) 3rd Ed. Vol. ***6,*** p. 178-85
2. Tsuge, H. & Mitsuda, H. (1973) J. Biochem. (Tokyo) ***73,*** 199-206
3. Pazur, J.H. (1966) in Methods in Enzymology (Colowick, S.P. & Kaplan, N.O., eds.)Vol. ***IX***, 82-7
4. O'Malley, J.J. & Weaver, J.L. (1972) Biochemistry ***11***, 3527-32

Cat.No.	Size
22778.01	100 mg
22778.02	500 mg

Glutamate dehydrogenase from bovine liver ca. 100 U/mg protein solution

(L-Glutamate: NAD(P)$^+$ oxidoreductase (deaminating))
EC 1.4.1.3 ♦ M_r ca. 350 000

DANGER
H334 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

For the determination of L-glutamate, ammonia and 2-oxoglutaric acid (1, 2). Suitable for urea determination in conjunction with urease (cat. no. 37799). In 50 % glycerol.
25 mg correspond to approx. 1 ml, 100 mg correspond to approx. 4 ml.

Unit definition: 1 U catalyzes the reductive amination of 1 µmole 2-oxoglutarate per minute at 25 °C, pH 7.3 in the presence of ADP.

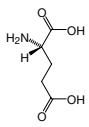
Activity in other units: ca. 40 U/mg protein (1 U causes the transformation of 1 µmole 2-oxoglutarate per minute at 25 °C and pH 7.3 under assay conditions not containing ADP).
Extraneous activities: LDH, MDH each max. 0.01 %; Ammonium ions less than 0.001 µmole per unit.

References:
1. Schmidt, E. & F.W.. (1983) Methods of Enzymatic Analysis (Bergmeyer, H.U. ed.) 3rd Ed. Vol. ***3,*** p. 216-27
2. Lund, P. (1985) Methods of Enzymatic Analysis (Bergmeyer, H.U. ed.) 3rd Ed. vol. ***8,*** p. 357-63

Cat.No.	Size
22904.01	25 mg
22904.02	100 mg

L-Glutamic acid research grade, Ph. Eur.

(L-2-Aminoglutaric acid; Glu)
$C_5H_9NO_4$ ♦ M_r 147.13 ♦ CAS [56-86-0]



EINECS 200-293-7 ♦ WGK 1 ♦ HS 29224200

Assay (titr.)	98.5 - 100.5 %
Heavy metals (Pb)	max. 10 ppm

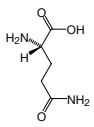
Cat.No.	Size
23000.01	250 g

L-Glutamic acid-5-amide

see 47204 L-Glutamine, page 55

L-Glutamine analytical grade, USP

(L-Glutamic acid-5-amide; L-2-Gln; Aminoglutaramic acid)
$C_5H_{10}N_2O_3$ ♦ M_r 146.2 ♦ CAS [56-85-9]



EINECS 200-292-1 ♦ WGK 1L ♦ HS 29224985

Assay (titr.)	99.0 - 101.0 %
Heavy metals (Pb)	max. 5 ppm.

Cat.No.	Size
22942.02	100 g
22942.03	250 g

L-Glutamine cell culture grade

(L-Glutamic acid-5-amide; L-2-Gln; Aminoglutaramic acid)
$C_5H_{10}N_2O_3$ ♦ CAS [56-85-9]

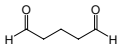
EINECS 200-292-1 ♦ HS 29224985

Assay (titr.)	min. 99.0 %
Endotoxin	≤ 50.0 E.U./g
Loss on drying	max. 0.2 %
Chloride (Cl)	max. 200 ppm
Sulfate (SO_4)	max. 200 ppm
Heavy metals (as Pb)	max. 10 ppm
Iron (Fe)	max. 10 ppm

Cat.No.	Size
47204.03	1 kg

Glutaraldehyde 25 % solution in water
for electron microscopy, standard grade

(Glutaric dialdehyde)
$C_5H_8O_2$ ♦ M_r 100.13



DANGER
H302-H314-H317-H331-H334-H335
-H400 ♦ MAK/TRK 0.1 ml/m³, 0.42 mg/m³
for glutaraldehyde ♦ GGVSE/ADR 8 II UN2922 ♦ IATA 8 II UN2922 ♦ WGK 3 ♦ HS 29121900
Storage temperature +2 °C to +8 °C

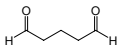
In vials; filled under argon.

Refractive index (20 °C) 1.3690 - 1.3755

Cat.No.	Size
23115.01	250 ml

Glutaraldehyde 25 % solution in water
for electron microscopy, high purity

(Glutaric dialdehyde)
$C_5H_8O_2$ ♦ M_r 100.13



DANGER
H302-H314-H317-H331-H334-H335
-H400 ♦ MAK/TRK 0.1 ml/m³, 0.42 mg/m³
for glutaraldehyde ♦ GGVSE/ADR 8 II UN2922 ♦ IATA 8 II UN2922 ♦ WGK 3 ♦ HS 29121900
Storage temperature +2 °C to +8 °C

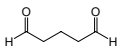
In vials; filled under argon.

Purification index (A235/A280, 1 % in water) max. 0.5

Cat.No.	Size
23114.01	25 ml
23114.02	10 x 5 ml

Glutaraldehyde 50 % solution in water
for electron microscopy

(Glutaric dialdehyde)
$C_5H_8O_2$ ♦ M_r 100.13



DANGER
H301-H314-H317-H331-H334-H335
-H400 ♦ MAK/TRK 0.1 ml/m³, 0.42 mg/m³
for glutaraldehyde ♦ GGVSE/ADR 8 II UN2922 ♦ IATA 8 II UN2922 ♦ WGK 3 ♦ HS 29121900
Storage temperature +2 °C to +8 °C

In vials; filled under argon.

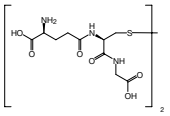
Refractive index (20 °C) 1.410 - 1.421

Cat.No.	Size
23116.01	25 ml
23116.02	10 x 5 ml

Glutaric dialdehyde

see 23114 Glutaraldehyde 25 % solution in water, page 55

L-Glutathione (oxidized form) cryst. research grade



(GSSG)
$C_{20}H_{32}N_8O_{12}S_2$ ♦ M_r 612.64 ♦ CAS [27025-41-8]

EINECS 248-170-7 ♦ WGK 1 ♦ HS 29309016
Storage temperature +2 °C to +8 °C

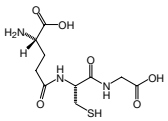
L-Glutathione oxidized (GSSG) is the dimeric form of glutathione (GSH). In vivo GSSG is reduced by the NADPH-dependent enzyme glutathione reductase. The ratio of GSH to GSSG is often used to measure the level of oxidative stress in cells, with higher concentrations of GSSG implying more oxidative stress.

Assay (HPLC)	min. 98.0 %
[α] 20 °C/D (c=4 % in water)	-106.0 ° to - 96.0 °

References:
1. ***Review:*** Meister, A. & Anderson, M.E. (1983) Ann. Rev. Biochem. ***52,*** 711-60

Cat.No.	Size
23130.01	1 g
23130.02	5 g

L-Glutathione (reduced form) cryst. research grade



(GSH; γ-L-Glutamyl-L-cysteinylglycine)
$C_{10}H_{17}N_3O_6S$ ♦ M_r 307.3 ♦ CAS [70-18-8]

EINECS 200-725-4 ♦ WGK 2L ♦ HS 29309016
Storage temperature +2 °C to +8 °C

Suitable to elute GST-tagged proteins from glutathione-agarose beads.
L-Glutathione reduced (GSH) is an antioxidant that helps to protect cells from reactive oxygen species such as free radicals and peroxides. By acting as an electron donor, glutathione reduces any disulfide bond formed within cytoplasmic proteins to cysteines.

Assay (CE)	min. 97.5 %
MP	182 - 192 °C
[α] 20 °C/D (c=4 % in water)	-15.5 ° to -17.5 °

References:
1. ***Review:*** Meister, A. & Anderson, M.E. (1983) Ann. Rev. Biochem. ***52,*** 711-60

Cat.No.	Size
23150.02	5 g
23150.03	25 g
23150.04	100 g

Glutathione Agarose Resin

(GST-Tag Purification)
HS 38220000

The resin permits rapid, mild and highly selective purification of GST fusion proteins with a one step procedure. The recovery rate is more than 95 % and the mild conditions retain the biological activity of the isolated proteins. Handling is easy and identical to standard protocols of other manufacturers, therefore there is no need to change established protocols. Suitable for isolation of small and large proteins tagged with GST in batch or column purifications.
Binding capacity: > 8 mg recombinant GST/ml gel.

Cat.No.	Size
42172.01	10 ml
42172.02	100 ml

Glycerin

see 23176 Glycerol from plant, page 56

Glycerol from plant Ph. Eur.

(Glycerin)
$C_3H_8O_3$ ♦ M_r 92.09 ♦ CAS [56-81-5]

EINECS 200-289-5 ♦ WGK 1L ♦ HS 29054500

Suitable for a wide range of applications:
- Supplement in cell culture
- Stabilizer of proteins
- Component of sample buffer for polyacrylamide gel electrophoresis
- Aid in casting gradient gels

In addition, glycerol can be used in pharmaceutical formulations and as an emollient, solvent, sweetening agent.

Assay (titr.)	min. 98.0 % - 101.0 %
Heavy metals (Pb)	max. 5 ppm
Refractive index	1.470 - 1.475

Cat.No.	Size
23176.01	1 L

Glycerol from plant 87 % Ph. Eur.

$C_3H_8O_3$ ♦ M_r 92.09 ♦ CAS [56-81-5]

HS 29054500

Suitable for a wide range of applications:
- Supplement in cell culture
- Stabilizer of proteins
- Component of sample buffer for polyacrylamide gel electrophoresis
- Aid in casting gradient gels

In addition, glycerol can be used in pharmaceutical formulations and as an emollient, solvent, sweetening agent.

Refractive index	1.449 - 1.455

Cat.No.	Size
23177.01	1 L

Glycerol from plant 87 % molecular biology grade

$C_3H_8O_3$ ♦ M_r 92.09 ♦ CAS [56-81-5]

HS 29054500

DNase/RNase not detected.

Suitable for a wide range of applications:
- Supplement in cell culture
- Stabilizer of proteins
- Component of sample buffer for polyacrylamide gel electrophoresis
- Aid in casting gradient gels

In addition, glycerol can be used in pharmaceutical formulations and as an emollient, solvent, sweetening agent.

Refractive index	1.449 – 1.455

Cat.No.	Size
39788.01	1 L

Glycerol gelatin for microscopy

DANGER
H314-H341 ♦ WGK 1 ♦ HS 38220000

Aqueous mounting medium for microscopy and histology. Glycerol alters the hygroscopic property of gelatin and its permeability to water vapour.

Cat.No.	Size
23310.02	100 g

Glycerol gelatin after Kaiser phenol-free

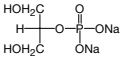
HS 38220000

Universal aqueous slide mounting medium for microscopy. The recipe is according to the well-known Kaiser's glycerol jelly. However, it does not contain phenol, making it a safe, non-hazardous alternative.
Contains ca. 40 % glycerol and ca. 7 % gelatin.

Refractive index	1.44 – 1.48

Cat.No.	Size
23311.01	50 ml

2-Glycerolphosphate·Na_2-salt



(Sodium-β-glycerophosphate)
$C_3H_7O_6P{\cdot}Na_2{\cdot}5H_2O$ ♦ M_r 306.1 ♦ CAS [13408-09-8]

EINECS 212-464-3 ♦ WGK 1 ♦ HS 29199000
Storage temperature +2 °C to +8 °C

Optically inactive. Inhibitor of serine and threonine phosphatase.

Assay (titr.)	min. 99.0 %

References:
1. Heppel, L.A. (1955) Methods. Enzymol. ***2***, 530-3

Cat.No.	Size
23330.02	100 g

Glycid ether 100 for electron microscopy

(1,2,3-Propanetriol glycidyl ether; GE 100; Epon 812)
M_r average 306 ♦ CAS [90529-77-4]

WARNING
H302-H315-H319-H341-H361 ♦ EINECS 292-011-4 ♦ WGK 1L ♦ HS 39073000

Mixture of aliphatic di- and triepoxides. Epoxy resin of low viscosity (ca. 100-200 mPa·s at 25 °C) (1). Combination with ARALDITE® (2). With D.E.R.® 736 (3).

Epoxide equivalent	135 - 154 g/mol
Viscosity (25 °C)	100 - 200 mPa·s
Chlorine (total)	10 - 13 %

ARALDITE = registered trademark of Huntsman Advanced Materials Europe
D.E.R. = registered trademark of Dow Chemical Company

References:
1. Luft, J.H. (1961) J. Biophys. Biochem. Cytol. ***9,*** 409-14
2. Coulter, H.D. (1967) J. Ultrastruct. Res. ***20,*** 346-55
3. Kushida, H. (1967) J. Electron Microsc. ***16,*** 278-80

Cat.No.	Size
21045.01	100 ml
21045.02	500 ml

Glycine electrophoresis grade

(Aminoacetic acid; Glycocoll)
$C_2H_5NO_2$ ♦ M_r 75.07 ♦ CAS [56-40-6]

EINECS 200-272-2 ♦ HS 29224985

Glycine is a component of Tris-Glycine (cat. no. 42530) and Tris-Glycine-SDS Running Buffers (cat. no. 42529) for polyacrylamide gel electrophoresis and as well of Towbin Buffer for Western Blots (cat. no. 42558).
Tested for use in electrode buffers for PAGE and in transfer buffers for Western Blots.

Assay (titr.)	98.5 – 101.0 %
Heavy metals (Pb)	max. 10 ppm
Chloride (Cl)	max. 70 ppm

Cat.No.	Size
23391.01	500 g
23391.02	1 kg
23391.03	5 kg

Glycine analytical grade, Ph. Eur., USP

(Aminoacetic acid; Glycocoll)
$C_2H_5NO_2$ ♦ M_r 75.07 ♦ CAS [56-40-6]

EINECS 200-272-2 ♦ WGK 1L ♦ HS 29224985

Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
23390.02	500 g
23390.04	1 kg
23390.03	5 kg

Glycogen from oyster research grade

$(C_6H_{10}O_5)n$ ♦ CAS [9005-79-2]

EINECS 232-683-8 ♦ WGK - ♦ HS 39139000
Storage temperature +2 °C to +8 °C

Substrate for glycogenphosphorylase (EC 2.4.1.1). Suitable as a carrier molecule for DNA and RNA in precipitation reactions, replacing tRNA and sonicated DNA.

References:
1. Sutherland, E.W. (1955) Methods Enzymol. ***1,*** 215-22

Cat.No.	Size
23550.02	5 g

Glycogen from oyster, solution 20 mg/ml

molecular biology grade

HS 38220000
Storage temperature -15 °C to -25 °C

DNase/RNase not detected. 20 mg/ml solution in redistilled water. Suitable as a carrier molecule for DNA and RNA, replacing tRNA and sonicated DNA.

References:
1. Sambrook, J. & Russell, D.W. (2001) Molecular Cloning, 3rd Edition, Cold Spring Harbor Laboratory Press (p 5.20)

Cat.No.	Size
39766.01	1 ml
39766.02	10 x 1 ml

Glycol

see 11285 Ethylene glycol, page 46

Gravity Blotter

HS 90272000

The SERVA Gravity Blotter has been developed by SERVA to blot film-based IEF and SDS PAGE gels at high efficiency. When performing horizontal gel electrophoresis the gel layer has to be stabilized by a backing, either by glass or plastic. This backing has to be removed before transferring the separated proteins onto a membrane by tank or semy-dry blotting. During this laborious process, the gel could get damaged. The use of the Gravity Blotter renders separating gel and film backing unneccessary. The results are comparable to tank or semi-dry transfer methods.
The unit consists of a base plate with a transfer area of 14 x 29 cm. The pressure is provided by aluminum plates that are placed on top of the blotting stack. Transfer time is 4 h or overnight.

Cat.No.	Size
GB-14X29	1 piece

GSH

see 23150 L-Glutathione (reduced form), page 56

GSSG

see 23150 L-Glutathione (oxidized form), page 56

GST-Tag Purification

see 42176 Mini Spin Columns, page 78

GST-Tag Purification

see 42175 Maxi Columns, page 75

GST-Tag Purification

see 42172 Glutathione Agarose Resin, page 56

GST-Tag Purification

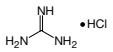
see 42174 Midi Columns, page 78

GST-Tag Purification

see 42173 Mini Columns, page 78

Guanidine·HCl analytical grade

(Aminomethanamidine)
CH_5N_3·HCl ♦ M_r 95.5 ♦ CAS [50-01-1]



WARNING
H302-H315-H319 ♦ EG-Index 607-148-00-0 ♦ EINECS 200-002-3 ♦ WGK 1L ♦ HS 29252900

Reagent for reversible denaturation and renaturation of proteins.

Assay	min. 99.5 %
pH (6 M water 20 °C)	4.5 - 7.0
A 1 cm/10 % in water	
260 nm	max. 0.03
280 nm	max. 0.015
Ammonium	max. 0.05 %

References:
1. Strohmain et al. (1977) Cell ***10***, 265
2. MacDonald et al. (1987) Methods Enzymol. ***152***, 219

Cat.No.	Size
24200.04	1 kg

Guanidine·HCl molecular biology grade

CH_5N_3·HCl ♦ M_r 95.5 ♦ CAS [50-01-1]

WARNING
H302-H315-H319 ♦ EG-Index 607-148-00-0 ♦ EINECS 200-002-3 ♦ WGK 1L ♦ HS 29252900

DNase/RNase not detected.

Assay	min. 99.5 %
A 1 cm/10 % in water	
260 nm	max. 0.03
280 nm	max. 0.015

Cat.No.	Size
39558.01	100 g
39558.02	500 g

Guanidine·HCl research grade

(Aminomethanamidine)
CH_5N_3·HCl ♦ M_r 95.5 ♦ CAS [50-01-1]

WARNING
H302-H315-H319 ♦ EG-Index 607-148-00-0 ♦ EINECS 200-002-3 ♦ WGK 1L ♦ HS 29252900

Reagent for reversible denaturation and renaturation of proteins.

Assay	min. 99.0 %
pH (6 M in water 20 °C)	4.5 - 7.0

Cat.No.	Size
24205.02	1 kg

Guanidine·thiocyanate molecular biology grade

CH_5N_3·HSCN ♦ M_r 118.2 ♦ CAS [593-84-0]

DANGER
H302-H312-H314-H332-H412 ♦ EG-Index 615-004-00-3 ♦ GGVSE/ADR 8 III UN1759 ♦ IATA 8 III UN1759 ♦ EINECS 209-812-1 ♦ WGK 2L ♦ HS 29252900

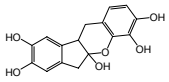
DNase/RNase not detected. Suitable for the isolation of RNA.

Assay (grav.)	min. 98.5 %
MP	115 - 122 °C
A 1 cm/3 M in water	
280 nm	max. 0.50
300 nm	max. 0.10

Cat.No.	Size
39577.01	250 g
39577.02	500 g

Hematoxylin pure

(Natural Black)
C.I.75290 ♦ $C_{16}H_{14}O_6$ ♦ M_r 302.29 ♦ CAS [517-28-2]



WARNING
H315-H319-H335 ♦ EINECS 208-237-3 ♦ WGK 2L ♦ HS 32030010

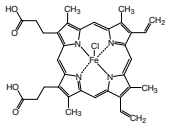
Tested for use in Delafield-Heidenhain staining. Light-sensitive.

λ max. 0.004 % in acetonitrile	293 ±3 nm
Indicator	pH 5.0 - 6.0

Cat.No.	Size
24420.01	25 g
24420.02	100 g

Hemin cryst. research grade

(Hemin chloride; Chlorohemin; Ferriprotoporphrin IX·chloride)
$C_{34}H_{32}FeN_4O_4$·Cl ♦ M_r 652.0 ♦ CAS [16009-13-5]



EINECS 240-140-1 ♦ HS 32030090
Storage temperature +2 °C to +8 °C

Highly purified standard substance; specially developed for determination of hemoglobin (1). As labelling catalyst for luminescence immunoassay (2).

Assay (photometric)	min. 98.0 %

References:
1. Wolf, H.U. et al. (1984) Clin. Chim. Acta ***136,*** 95-104
2. Ikariyama, Y. & Suzuki, S. (1982) Anal. Chem. ***54,*** 1126-9

Cat.No.	Size
24410.01	1 g
24410.02	5 g

Heparin sodium research grade

WGK 1 ♦ HS 30019091

From porcine intestinal mucosa. Potency min. 180 IU/mg.

pH 1 % in water	5.5 - 8.0
Loss on drying	max. 8.0 %

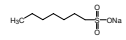
Cat.No.	Size
24590.01	500 mg
24590.02	2,5 g

HEPES

see 25245 N-(2-Hydroxyethyl)piperazine-N'-2-ethane sulfonic acid, page 66

1-Heptanesulfonic acid·Na-salt research grade

$C_7H_{15}O_3S$·Na ♦ M_r 202.25 ♦ CAS [22767-50-6]



WARNING
H315-H319-H335 ♦ EINECS 245-210-5 ♦ WGK 1 ♦ HS 29041000

Ion pairing reagent used in the HPLC analysis of proteins and peptides and capillary electrophoresis analysis of peptides.

Assay (titr.)	min. 98.0 %
A 1 cm/220 nm/0.005 M in water	max. 0.08

Cat.No.	Size
24604.02	25 g

Heteroauxins

see 26181 Indole-3-acetic acid, page 67

1 ml HiFliQ Co-NTA FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Cobalt-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Super Co-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Co-NTA capacity: 40 - 50 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42287.01	1 piece

5 ml HiFliQ Co-NTA FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Cobalt-NTA Agaros Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Super Co-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Co-NTA capacity: 40 - 50 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min (5 ml)
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42289.01	1 piece

1 ml HiFliQ Co-NTA FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Cobalt-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Super Co-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Co-NTA capacity: 40 - 50 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42288.01	5 pieces

5 ml HiFliQ Co-NTA FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Cobalt-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Super Co-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Co-NTA capacity: 40 - 50 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42290.01	5 pieces

1 ml HiFliQ GST FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Glutathione coupled agarose resin for rapid affinity purification of Glutathione S-Transferase (GST)-tagged proteins under native conditions.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Glutathione Agarose
Base matrix: Agarose
GST capacity: 10 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42291.01	1 piece

1 ml HiFliQ GST FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Glutathione coupled agarose resin for rapid affinity purification of Glutathione S-Transferase (GST)-tagged proteins under native conditions.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Glutathione Agarose
Base matrix: Agarose
GST capacity: 10 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42292.01	5 pieces

5 ml HiFliQ GST FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Glutathione coupled agarose resin for rapid affinity purification of Glutathione S-Transferase (GST)-tagged proteins under native conditions.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Glutathione Agarose
Base matrix: Agarose
GST capacity: 10 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42293.01	1 piece

5 ml HiFliQ GST FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Glutathione coupled agarose resin for rapid affinity purification of Glutathione S-Transferase (GST) -tagged proteins under native conditions.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLC's), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Glutathione Agarose
Base matrix: Agarose
GST capacity: 10 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max.pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42294.01	5 pieces

1 ml HiFliQ Ni-NTA FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Nickel-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Super Ni-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Ni-NTA capacity: 50 - 75 mg (per 1 ml resin)
Flow rate: 1 ml/min (1 ml)
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42283.01	1 piece

1 ml HiFliQ Ni-NTA FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Nickel-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Super Ni-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Ni-NTA capacity: 50 - 75 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42284.01	5 pieces

5 ml HiFliQ Ni-NTA FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Nickel-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Super Ni-NTA Agarose
Base matrix: 7.5 % cross-linked agarose
Ni-NTA capacity: 50 - 75 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42285.01	1 piece

5 ml HiFliQ Ni-NTA FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with pre-charged Nickel-NTA Agarose Resin for affinity purification of poly-histidine tagged recombinant proteins by immobilized metal ion affinity chromatography (IMAC).
Available in 1 ml and 5 ml HiFliQ column sizes with high binding capacity and minimal ion leakage. Compatible with all common chromatography HPLC and FPLC instruments, and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Super Ni-NTA Agarose
Base matrix: 7.5% cross-linked agarose
Ni-NTA capacity: 50 - 75 mg (per 1 ml resin)
Flow rate: 1 ml/min (1 ml), 1-5 ml/min (5 ml)
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42286.01	5 pieces

1 ml HiFliQ Protein A FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein A Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Protein A Agarose FF
Base matrix: Agarose
Protein A capacity (hIgG): 30 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42295.01	1 piece

5 ml HiFliQ Protein A FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein A Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Protein A Agarose FF
Base matrix: Agarose
Protein A capacity (hIgG): 30 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42297.01	1 piece

1 ml HiFliQ Protein A FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein A Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Protein A Agarose FF
Base matrix: Agarose
Protein A capacity (hIgG): 30 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42296.01	5 pieces

5 ml HiFliQ Protein A FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein A Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Protein A Agarose FF
Base matrix: Agarose
Protein A capacity (hIgG): 30 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42298.01	5 pieces

1 ml HiFliQ Protein G FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein G Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Protein G Agarose FF
Base matrix: Agarose
Protein G capacity (hIgG): 20 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42299.01	1 piece

5 ml HiFliQ Protein G FPLC Column

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein G Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Protein G Agarose FF
Base matrix: Agarose
Protein G capacity (hIgG): 20 mg (per 1 ml resin)
Flow rate: 1 - 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42301.01	1 piece

1 ml HiFliQ Protein G FPLC Columns

HS 38220000

Protein Ark HiFliQ columns pre-packed and ready to use with Protein G Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 1 ml resin
Column construction: Polypropylene
Resin: Protein G Agarose FF
Base matrix: Agarose
Protein G capacity (hIgG): 20 mg (per 1 ml resin)
Flow rate: 1 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 15 x 80 mm

Cat.No.	Size
42300.01	5 pieces

5 ml HiFliQ Protein G FPLC Columns

HS 38220000

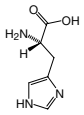
Protein Ark HiFliQ columns pre-packed and ready to use with Protein G Agarose FF resin for rapid antibody purification from serum, ascites and tissue culture supernatants.
Available in 1 ml and 5 ml HiFliQ column sizes with high ligand density and high binding capacity. Compatible with all common chromatography HPLC and FPLC instruments (including ÄKTA™ FPLCs), and low pressure pumps and syringes using an appropriate adaptor.

Specifications
Column volume: 5 ml resin
Column construction: Polypropylene
Resin: Protein G Agarose FF
Base matrix: Agarose
Protein G capacity (hIgG): 20 mg (per 1 ml resin)
Flow rate: 1- 5 ml/min
Max. pressure: 0.5 MPa (72 psi)
Universal 10.32 (1/16") UNF threads: Inlet Female/Outlet Male
Dimensions: 23 x 80 mm

Cat.No.	Size
42302.01	5 pieces

L-Histidine base research grade, Ph. Eur., USP

(His; L-2-Amino-3-(4-imidazolyl)-propionic acid)
$C_6H_9N_3O_2$ ♦ M_r 155.16 ♦ CAS [71-00-1]



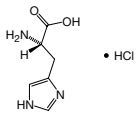
EINECS 200-745-3 ♦ WGK 1L ♦ HS 29224985

Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
24820.02	100 g

L-Histidine·HCl monohydrate research grade, Ph. Eur.

(His-HCl; L-2-Amino-3-(4-imidazolyl)propionic acid hydrochloride)
$C_6H_9N_3O_2 \cdot HCl \cdot H_2O$ ♦ M_r 209.6 ♦ CAS [5934-29-2]



WGK 1L ♦ HS 29332990

Assay (titr.)	98.5 - 101.0 %.
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
24842.02	100 g

HPE™ BlueHorizon™

HS 90272000

The HPE™ BlueHorizon™ is a flatbed system for horizontal electrophoresis using precast gels, self-cast gels and gel strips. Main applications are isoelectric focusing (IEF) including the run of IPG strips (like SERVA IPG *Blue*Strips) in 2D PAGE and SDS PAGE, but also the separation of nucleic acids in polyacrylamide gels.

The unit consists of a stable metal housing and an integrated drawer. The drawer holds the cooling plate with connectors for the external refrigeration system (e.g. the circulatory refrigerator bath HPE™ Cooling Unit, cat. no. HPE-CU1). The cooling plate is made from special ceramic material (maximum gel size 260 x 205 mm) for efficient cooling. It provides even heat dissipation, allowing to run gels at a temperature as low as 4 °C. This is particularly important when applying high voltage to thin isoelectric focusing (IEF) gels.

The electrode lid comes with one pair of platinum electrodes. Three fixed electrode positions allow the usage of a wide range of different sized gels. Optional, an electrode lid with a triple electrode arrangement for bi-directional gel run is available. The easy-to-clean housing allows placing the power supply on top of the unit saving valuable space on your bench.

- High capacity cooling plate suitable for high voltage applications like IEF etc.
- Fixed platinum electrode distances of 270 mm, 195 mm and 115 mm
- For all kinds of film-backed flatbed gels, self or precast
- Samples are easy to load
- Economical reagent usage (minimizing running buffer volume)
- Smart design - made in Germany

HPE™ BlueHorizon™ – a highly sophisticated instrument to run horizontal gels under reliable temperature control.

Cat.No.	Size
HPE-BH	1 piece

HPE™ BlueHorizon™ Bidirectional, with 3 Electrode Lid

HS 90272000

The HPE™ BlueHorizon™ is a flatbed system for horizontal electrophoresis using precast gels, self-cast gels and gel strips. Main applications are isoelectric focusing (IEF) including the run of IPG strips (like SERVA IPG BlueStrips), 2D PAGE and SDS PAGE, HCP analysis and separation of recombinant proteins/antibodies, but also the separation of nucleic acids in polyacrylamide gels.

The unit consists of a stable metal housing and an integrated drawer. The drawer holds the cooling plate with connectors for the external refrigeration system (e.g. the circulatory refrigerator bath HPE™ Cooling Unit, cat. no. HPE-CU1). The cooling plate is made from special ceramic material (maximum gel size 260 x 205 mm) for efficient cooling. It provides even heat dissipation, allowing to run gels at a temperature as low as 4 °C. This is particularly important when applying high voltage to thin isoelectric focusing (IEF) gels.

The electrode lid comes with a triple electrode arrangement for bi-directional gel runs. The easy-to-clean housing allows placing the power supply on top of the unit saving valuable space on your bench.

- High capacity cooling plate suitable for high voltage applications like IEF etc.
- Fixed platinum electrode distances of 270 mm, 195 mm and 115 mm
- For all kinds of film-backed flatbed gels, self or precast
- Samples are easy to load
- Economical reagent usage (minimizing running buffer volume)
- Smart design - made in Germany

HPE™ BlueHorizon™ – a highly sophisticated instrument to run horizontal gels under reliable temperature control.

Cat.No.	Size
HPE-BH3E	1 piece

HPE™ BlueHorizon™ C

HS 90272000

HPE™ BlueHorizon™ C includes:
- HPE™ BlueHorizon™ flatbed chamber (cat. no. HPE-BH)
- HPE™ Cooling Unit (cat. no. HPE-CU1)

Cat.No.	Size
HPE-BHC	1 piece

HPE™ BlueHorizon™ Double Deck

HS 90272000

The HPE™ BlueHorizon™ Double Deck consists of two single HPE™ BlueHorizon™ flatbed chambers that can easily combined to a mini tower to double the gel running capacity. To operate the system, both units can be connected to one chiller (cat. no. HPE-CU) and to one power supply (cat. no. BP-3000-HPE).

Cat.No.	Size
HPE-BHD	1 piece

HPE™ BlueHorizon™ PS

HS 90272000

HPE™ BlueHorizon™ PS includes:
- HPE™ BlueHorizon™ flatbed chamber (cat. no. HPE-BH)
- BluePower™ 3000 Volt Power Supply (cat. no. BP-3000-HPE)

Cat.No.	Size
HPE-BHP	1 piece

HPE™ BlueHorizon™ Quadra Deck

HS 90272000

The HPE™ BlueHorizon™ Quadra Deck consists of four single HPE™ BlueHorizon™ flatbed chambers that can be easily combined to a mini tower to quadruple the gel running capacity. To operate the system, all four units can be connected to one chiller (cat. no. HPE-CU) and to one power supply (cat. no. BP-3000-HPE).

Cat.No.	Size
HPE-BHQ	1 piece

HPE™ BlueHorizon™ System

HS 90272000

HPE™ BlueHorizon™ System includes:

- HPE™ BlueHorizon™ flatbed chamber (cat. no. HPE-BH)
- BluePower™ 3000 Volt Power Supply (cat. no. BP-3000-HPE)
- HPE™ Cooling Unit (cat. no. HPE-CU1)

Cat.No.	Size
HPE-BHSYS	1 piece

HPE™ BlueHorizon™ Triple Deck

HS 90272000

The HPE™ BlueHorizon™ Triple Deck consists of three single HPE™ BlueHorizon™ flatbed chambers that can be easily combined to a mini tower to triple the gel running capacity. To operate the system, all three units can be connected to one chiller (cat. no. HPE-CU) and to one power supply (cat. no. BP-3000-HPE).

Cat.No.	Size
HPE-BHT	1 piece

HPE™ BlueTower

HS 90272000

The HPE™ BlueTower allows electrophoretical separations of up to four horizontal flatbed gels at the same time. It is used for 1D and 2D electrophoresis gels. For more information please refer to „HPE™ Blue Tower System“ (cat. no. HPE-TS2).

Cat.No.	Size
HPE-T02	1 piece

HPE™ BlueTower System

HS 90272000

The HPE™ BlueTower System allows electrophoretical separations in up to four horizontal gels at the same time. It is used for 1D and 2D electrophoresis gels, where multiple runs are an important demand. Structurally, the HPE™ BlueTower consists of four horizontal electrophoresis chambers, which are built as movable drawers into a metal housing. The HPE™ BlueTower and the HPE™ gels have been developed together as a system to achieve better results than with conventional SDS polyacrylamide gel electrophoresis (PAGE) technology. The precast HPE™ gels, which are less than 1 mm thin and film-backed, are protected from light during the run. No glass plates are used. They are placed on aluminum oxide ceramic cooling plates, which ensure very efficient heat dissipation and therefore straight electrophoretic migration in each gel.

Content:
HPE™ BlueTower (HPE-T02), HPE™ BluePower™ 3000V Supply (BP-3000-HPE) and HPE™ Cooling Unit (HPE-CU1).

Cat.No.	Size
HPE-TS2	1 piece

HPE™ Cooling Unit

HS 90272000

Cooling unit for HPE™ BlueTower and HPE™ BlueHorizon™ flatbed systems.

Cat.No.	Size
HPE-CU1	1 piece

2D HPE™ Double BlotGel NF 12.5 % Kit

Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid.
The gels can be easily blotted because the gels are non-covalently bound to the supporting film so that it can be removed from the gel after electrophoresis. This non-fluorescent (NF) supporting film also provides best results for fluorescent staining and labelling.
Suitable for running 2 x 11 cm IPG strips plus 1 marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™.

Multiphor = trademark of GE Healthcare

Cat.No.	Size
43430.01	1 kit

2D HPE™ Double Gel 10 - 15 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 2 x 11 cm IPG strips plus 1 marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining.
Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43309.01	1 kit

2D HPE™ Double Gel 12.5 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 2 x 11 cm IPG strips plus 1 marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining.
Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43308.01	1 kit

2D HPE™ Double Gel NF 12.5 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 2 x 11 cm IPG strips plus 1 marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on NF backing providing best results for fluorescent staining and labelling. Can also be used for for silver and Coomassie® staining but for best results use gels on standard backing.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43302.01	1 kit

2D HPE™ Double Gel NF 10 - 15 % Kit

Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 2 x 11 cm IPG strips plus 1 marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on NF backing providing best results for fluorescent staining and labelling. Can also be used for for silver and Coomassie® staining but for best results use gels on standard backing.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43303.01	1 kit

HPE™ Electrode Lid

HS 90272000

Replacement Lid for HPE™ Tower, HPE™ BlueHorizon.

Cat.No.	Size
HPE-RL	1 piece

HPE™ Electrode Mounting Kit

HS 90272000

Cat.No.	Size
HPE-EMK	1 kit

2D HPE™ Large BlotGel NF 12.5 % Kit

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 1 x 24 cm IPG strip plus one marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining.
Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43432.01	1 kit

2D HPE™ Large Gel 10 - 15 % Kit Size: 255 x 200 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 1 x 24 cm IPG strip plus one marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining.
Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43311.01	1 kit

2D HPE™ Large Gel 12.5 % Kit Size: 255 x 200 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 1 x 24 cm IPG strip plus one marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining.
Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43310.01	1 kit

2D HPE™ Large Gel NF 10 - 15 % Kit Size: 255 x 200 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 1 x 24 cm IPG strip plus one marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on NF backing providing best results for fluorescent staining and labelling. Also suitable for silver and Coomassie® staining but for best results use gels on standard backing.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43305.01	1 kit

2D HPE™ Large Gel NF 12.5 % Kit Size: 255 x 200 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 1 x 24 cm IPG strip plus one marker lane by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on NF backing providing best results for fluorescent staining and labelling. Also suitable for silver and Coomassie® staining but for best results use gels on standard backing.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43304.01	1 kit

2D HPE™ Mercator Gel 12.5 % Kit

HS 38220000
Storage temperature +2 °C to +8 °C

2D HPE™ Mercator Gels allow a much more precise XY-coordinates determination of protein spots in 2D gels.
2D gel analysis is mostly done by triangulation of the XY-coordinates of the protein spots of a 2D gel picture with an appropriate software. For comparison of the spot pattern of different gels, gels have to be normalized and the pictures are laid on top of each other. A major obstacle in comparing 2D protein gels are the technical gel-to-gel variations because of differences in sample preparation, gel casting and conduct of electrophoresis.
Simone König and her research group (IZKF, Münster, Germany) developed a method for generation of a reference grid, which improves the deviation of the correction of protein coordinates by an order of magnitude: comparative 2D fluorescence gel electrophoresis (CoFGE). The reference grid is formed by fluorescence-labelled marker proteins, which are applied to the gel in equal distances. After co-electrophoresis of protein marker and with a different fluorescent dye labelled protein sample, the XY-coordinates are much more precisely determined with the aid of the multiple triangulation points formed by the reference grid compared to standard methods.
In cooperation with the research group of Simone König, SERVA developed the 2D HPE™ Mercator Gels for CoFGE on horizontal electrophoresis systems HPE™ BlueTower and HPE™ BlueHorizon™.
For easy loading of the fluorescence-labelled protein marker, the gels have in addition to the IPG slot 14 sample slots. The slots are on the cathode side in a distance of 3 mm to the IPG slot; the distance to each other is 18 mm.
The kit contains 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid.

References:
1. Ackermann, D. et al. (2012) Electrophoresis ***33***, 1406-1410
2. Hanneken, M. and König, S. (2014) Electrophoresis ***35***, 1118-1121

Cat.No.	Size
43410.01	1 kit

HPE™ Pool

HS 90272000

Pool for rehydrating SERVA flatbed gels up to 260 x 125 mm.

Cat.No.	Size
HPE-A32	1 piece

HPE™ Replacement Electrodes, Pair of 2

HS 90272000

Cat.No.	Size
HPE-RE	2 pieces

2D HPE™ Triple BlotGel NF 12.5 % Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 3 x 7 cm IPG strips plus 2 marker lanes by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining. Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43429.01	1 kit

2D HPE™ Triple Gel 10 - 15 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 3 x 7 cm IPG strips plus 2 marker lanes by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining. Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43307.01	1 kit

2D HPE™ Triple Gel 12.5 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 3 x 7 cm IPG strips plus 2 marker lanes by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on standard backing providing best results for silver and Coomassie® staining. Not suitable for fluorescent applications.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43306.01	1 kit

2D HPE™ Triple Gel NF 10 - 15 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers FS wicks and cooling contact fluid. Suitable for running 3 x 7 cm IPG strips plus 2 marker lanes by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on NF backing providing best results for fluorescent staining and labelling. Can also be used for silver and Coomassie® staining but for best results use gels on standard backings.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43301.01	1 kit

2D HPE™ Triple Gel NF 12.5 % Kit Size: 250 x 110 x 0.65 mm

HS 38220000

Kit comprising 4 plastic-backed gels, including running and equilibration buffers, FS wicks and cooling contact fluid. Suitable for running 3 x 7 cm IPG strips plus 2 marker lanes by horizontal electrophoresis on HPE™ BlueTower, HPE™ BlueHorizon or Multiphor II™. Gels are on NF backing providing best results for fluorescent staining and labelling. Can also be used for silver and Coomassie® staining but for best results use gels on standard backings.

Coomassie = registered trademark of ICI Ltd.
Multiphor = trademark of GE Healthcare

Cat.No.	Size
43300.01	1 kit

Hyaluronidase from ovine testes min. 1000 U/mg lyophil.

EC 3.2.1.35 ♦ M_r ca. 55 000 ♦ CAS [37326-33-3]

DANGER
H334 ♦ EINECS 253-464-3 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Glucosidase which cleaves endo-N-acetlyhexosaminic bonds in hyaluronic acid and chondroitin sulfate A and C to tetrasaccharide residues. As hyaluronic acid and chondroitin sulfate are often found in connective tissues, Hyaluronidase is often used in conjunction with collagenase to dissociate the extracellular matrix between cells of animal tissue, in order to release viable cells for use in tissue culture.
It may also be used to clarify synovial fluids in order to make cell counts possible.
Unit definition: 1 U produces the same turbidity reduction in a mixture of hyaluronic acid and albumin as 1 I.U. (International Unit) of a standard hyaluronidase preparation (1).

References:
1. Mathews, M.B. (1966) Methods Enzymol. ***8,*** 654-62

Cat.No.	Size
25118.01	50 mg
25118.02	500 mg

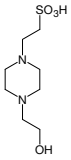
2-Hydroxy-5-sulfobenzoic acid

see 35706 5-Sulfosalicylic acid, page 144

N-(2-Hydroxyethyl)piperazine-N'-2-ethane sulfonic acid

analytical grade, for cell culture

(HEPES)
$C_8H_{18}N_2O_4S$ ♦ M_r 238.3 ♦ CAS [7365-45-9]



EINECS 230-907-9 ♦ WGK 1L ♦ HS 29335995

pKa 20 = 7.55. Buffering substance (1). Tested for use in tissue culture (2). Physical parameters (3).

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
260 nm	max. 0.1
280 nm	max. 0.08
Heavy metals (Pb)	max. 10 ppm
pH 10 % in water	5.0 - 6.5

References:
1. Good, N.E. et al. (1966) Biochemistry ***5,*** 467-77
2. Shipman jr., Ch. (1969) Proc. Soc. Exp. Biol. Med.***130,*** 305-10
3. Vega, C.A. & Bates, R.G. (1976) Anal. Chem. ***48,***1293-6

Cat.No.	Size
25245.03	100 g
25245.04	250 g
25245.05	1 kg
25245.06	5 kg

N-(2-Hydroxyethyl)piperazine-N'-2-ethane sulfonic acid

for biochemistry

(HEPES)
$C_8H_{18}N_2O_4S$ ♦ M_r 238.3 ♦ CAS [7365-45-9]

EINECS 230-907-9 ♦ WGK 1L ♦ HS 29335995

pKa 20 = 7.55. Buffering substance for biochemistry and molecular biology.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
260 nm	max. 0.1
280 nm	max. 0.08
Heavy metals (Pb)	max. 10 ppm
pH 10 % in water	5.0 - 6.5

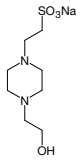
References:
1. Good, N.E. et al. (1966) Biochemistry ***5***, 467-77
2. Vega, C.A. & Bates, R.G. (1976) Anal. Chem. ***48***,1293-6

Cat.No.	Size
25247.03	1 kg

N-(2-Hydroxyethyl)piperazine-N'-2-ethane sulfonic acid ·Na-salt

analytical grade

(HEPES·Na-salt)
$C_8H_{17}N_2O_4S{\cdot}Na$ ♦ M_r 260.3 ♦ CAS [75277-39-3]



EINECS 278-169-7 ♦ WGK 1 ♦ HS 29335995

pKa 20 = 7.55. Buffering substance for biochemistry and molecular biology.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
260 nm	max. 0.15
280 nm	max. 0.1
pH 10 % in water	9.5 - 11.5

Cat.No.	Size
25249.04	1 kg

3-Hydroxypropionic acid lactone

see 33672 β-Propiolactone, page 93

6-Hydroxypurine riboside

see 26250 Inosine, page 67

Hygromycin B research grade

CAS [31282-04-9]

DANGER
H300-H310-H315-H318-H330-H335 ♦ GGVSE/ADR 6.1 I UN3462 ♦ IATA 6.1 I UN3462 ♦ WGK 2 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Aminoglycoside antibiotic that inhibits growth of procaryotic micro-organisms (bacteria), eukaryotic microorganisms (yeasts) and mammalian cells.
Inhibits protein synthesis at translocation step; causes misreading of mRNA. A gene from *E. coli* encoding resistance to hygromycin B can be isolated and cloned by recombinant DNA technology. It is useful for the identification or selection of recombinant clones in various cell types.

Assay (HPLC)	min. 90.0 %
Potency (on a dry basis)	≥ 900 u/mg

Cat.No.	Size
25965.01	250 mg
25965.02	500 mg
25965.03	1 g

Hypoxanthine-9-β-D-ribofuranoside

see 26250 Inosine, page 67

IAA

see 26181 Indole-3-acetic acid, page 67

IBA

see 26172 Indole-3-butyric acid, page 67

IBMX

see 26445 3-Isobutyl-1-methylxanthine, page 68

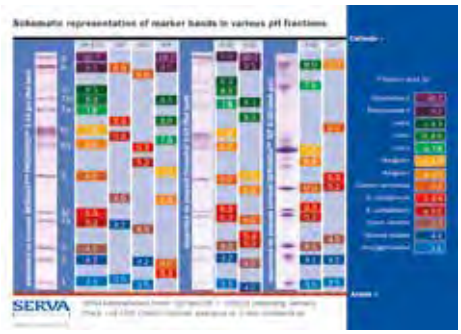
IDA-Agarose Resins

see 42141 SERVA Ni-IDA HD Agarose Resin, page 120

IEF Marker 3-10, Liquid Mix

(Protein Standards (Markers) for IEF)
HS 38220000
Storage temperature -15 °C to -25 °C

Ready-to-use protein marker for isoelectric focusing.
Contains 9 proteins of the pI range 3.5 to 10.7 (13 isoforms).
Buffer composition:
0.01 % bromophenol blue (Na-salt), 0.01 % methyl red (Na-salt), 10 % glycerol.



Amyloglucosidase	pI 3.5
Glucose oxidase	pI 4.2
Trypsin inhibitor	pI 4.5
β-Lactoglobulin	pI 5.15/5.3
Carboanhydrase	pI 6.0
Myoglobin horse	pI 6.9/7.35
Lentil lectin	pI 7.75/8.0/8.3
Ribonuclease A	pI 9.45
Cytochrome C	pI 10.65

Cat.No.	Size
39212.01	500 µl

IEF Sample Buffer (2x) sterile filtered

HS 38220000
Storage temperature +2 °C to +8 °C

SERVA IEF sample buffer is suited to all vertical and horizontal IEF applications and systems. The sample buffer is supplied as 2x concentrate. It is sterile filtered, beneficial to long shelf life and absence of contaminants. Simply mix the liquid sample 1:1 with the buffer or dissolve a solid sample in the buffer first and dilute with water 1:1. When performing IEF in the presence of urea mix the sample with the buffer and add solid urea or use concentrated urea solution.
The buffer contains 4 % SERVALYT™ 4 - 9 T, 30 % glycerol and 0.005 % phenol red.

Cat.No.	Size
42537.01	20 ml

IEF Starter Kit

DANGER
H314-H334-H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

The kit contains:
3 SERVALYT™ PRECOTES™ 125 x 125 mm with PAG layer 300 µm

Electrode wicks	20
Applicator strips	1
Electrode buffer solutions	2 x 10 ml
Heat exchange liquid	10 ml
SERVA Blue W	100 mg
SERVA Violet 17	100 mg
IEF marker 3-10 SERVA Liquid Mix	60 µl

Cat.No.	Size
39060.01	1 kit

IgG Sample Diluter IEF

HS 38220000

Dilution for CSF analysis on IEF gels.

Cat.No.	Size
43336.01	100 ml

Imidazole research grade

$C_3H_4N_2$ ♦ M_r 68.08 ♦ CAS [288-32-4]

DANGER
H301-H314-H361d ♦ GGVSE/
ADR 8 III UN2923 ♦ IATA 8 III UN2923 ♦
EINECS 206-019-2 ♦ WGK 1L ♦ HS 29332990

For preparation of buffers in the pH range of 6.2 - 7.8 (25°C)
Imidazol is used for the elution of His-tagged recombinant proteins in immobilized metal-affinity chromatography (IMAC), as a chelator for the binding of various divalent cations and in reverse staining of SDS-PAGE protein gels.

Assay (GC) min. 99.0 %

Cat.No.	Size
26081.01	100 g
26081.02	500 g

Immobilon™-P-membrane

Pore size 0.45 µm, format: 26.5 cm x 3.75 m

HS 39219090

Immobilon™-P-membranes developed by Millipore Corp. are specially designed for Western Blot techniques. The membranes, made of polyvinylidenfluoride (PVDF), show excellent mechanical stability and are compatible with most staining procedures including immunological methods.

Cat.No.	Size
42581.01	1 roll

Indole-3-acetic acid research grade

(IAA; Heteroauxins; Auxins)
$C_{10}H_9NO_2$ ♦ M_r 175.2 ♦ CAS [87-51-4]

EINECS 201-748-2 ♦ HS 29339980
Storage temperature +2 °C to +8 °C

Plant growth regulator.

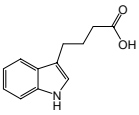
Assay (titr.) 97.0 - 103.0 %
MP 165 - 169 °C

References:
1. Graffeo, A. et al. (1976) Clin. Chem. ***22***, 184-7

Cat.No.	Size
26181.01	5 g

Indole-3-butyric acid research grade

(4-(3-Indolyl)butyric acid; IBA; Auxins)
$C_{12}H_{13}NO_2$ ♦ M_r 203.24 ♦ CAS [133-32-4]



DANGER
H301-H315-H319-H335 ♦ GGVSE/
ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦
EINECS 205-101-5 ♦ WGK 2 ♦ HS 29339980
Storage temperature +2 °C to +8 °C

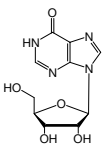
Plant growth regulator. Sensitive to light, store in the dark.

Assay (titr.) min. 99.0 %
Water (KF) max. 1.0 %

Cat.No.	Size
26172.03	25 g
26172.04	100 g

Inosine research grade

(Hypoxanthine-9-β-D-ribofuranoside; 6-Hydroxypurine riboside)
$C_{10}H_{12}N_4O_5$ ♦ M_r 268.23 ♦ CAS [58-63-9]



EINECS 200-390-4 ♦ WGK 1 ♦ HS 29349990

Inosine is able to base pair with deoxythymidine, deoxyadenosine and deoxyguanosine. Incorporation of inosine in place of guanine modulates translational events. It regulates biological processes through adenosine receptors.

Assay (HPLC) min. 98.0 %
Heavy metals (Pb) max. 10 ppm

Cat.No.	Size
26250.03	100 g

myo-Inositol research grade, USP/NF

(meso-Inositol; i-Inositol; 1,2,3,5/4,6-Hexahydroxycyclohexane)
$C_6H_{12}O_6$ ♦ M_r 180.2 ♦ CAS [87-89-8]

EINECS 201-781-2 ♦ WGK 1 ♦ HS 29061390

For bacteriology. Optically inactive. Tested for its suitability in tissue culture.

Assay (HPLC)	min. 97.0 %
MP	224 - 227 °C

Cat.No.	Size
26310.01	100 g

meso-Inositol

see 26310 *myo*-Inositol, page 68

Insulin, recombinant human, min. 27.5 IU/mg Ph. Eur., USP

M_r ca. 5800 ♦ CAS [11061-68-0]

HS 29371200
Storage temperature -15 °C to -25 °C

Identical in structure and function to the native human sequence. Essential for long-term growth of various cell lines. Stimulates the proliferation of cells and supports carbohydrate metabolism. Absence of insulin in the medium may result in disturbances of cell morphology and growth rate. Recommended concentration for use in serum free media is 1 – 10 µg/ml.

Assay	95.0 - 105.0 %
Bacterial endotoxins (IU/mg)	max. 10

Cat.No.	Size
26360.01	50 mg

INT

see 26840 Iodonitrotetrazolium chloride, page 68

Iodoacetamide research grade

C_2H_4INO ♦ M_r 185.0 ♦ CAS [144-48-9]

WARNING
H315-H319-H335 ♦ EINECS 205-630-1 ♦ WGK 2 ♦ HS 29241900

Storage temperature +2 °C to +8 °C

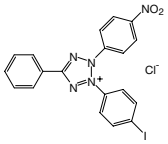
Alkylating agent for use in protein sample preparation applications. For carboxymethylation of proteins.

Assay (HPLC)	min. 99.0 %

References:
1. Gurd, F.R. (1967) Methods Enzymol. ***11,*** 532-41

Cat.No.	Size
26710.01	5 g
26710.02	25 g

Iodonitrotetrazolium chloride research grade



(INT; 2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-phenyl-2H-tetrazolium·chloride; Iodonitrotetrazolium violet)
$C_{19}H_{13}ClIN_5O_2$ ♦ M_r 505.72 ♦ CAS [146-68-9]

WARNING
H302-H312-H332 ♦ EINECS 205-676-2 ♦ WGK 1 ♦ HS 29339980

For LDH detection (1).
For colorimetric measurement of enzymatic hydrolysis of terminal galactose from GM_1 ganglioside (2).

Assay (titr.)	min. 99.0 %

References:
1. Babson, A.L. & Babson, S.R. (1973) Clin. Chem. ***19,*** 766-9
2. Urbanowski, J.C. et al. (1980) Anal. Biochem. ***105,*** 461-7

Cat.No.	Size
26840.02	2,5 g
26840.03	10 g

Ion Exchange Media

see 42443 SERDOLIT® PAD I, 0.1 - 0.2 mm, page 109

Ion Exchange Media

see 41030 DOWEX® 1X2 (50-100 mesh), page 41

IPG Chamber Cleaner

HS 34022090

IPG Chamber Cleaner is a pH neutral, non-toxic, highly active cleaning material. It has been specifically formulated for effectively removing protein deposits from the IPG strip holder, lids, etc. of a first dimension isoelectric focusing unit, e.g. IEF100.

Cat.No.	Size
43399.01	1 L

IPG Strips

see 43001 SERVA IPG *Blue*Strip 3-10 / 7 cm, page 115

IPTG

see 26600 Isopropyl-β-D-thiogalactopyranoside, page 69

Isoamyl alcohol molecular biology grade

(3-Methyl-1-butanol; Isopentylalcohol)
$C_5H_{12}O$ ♦ M_r 88.15 ♦ CAS [123-51-3]

WARNING
H226-H332-H335 ♦ MAK/TRK 370 mg/m³; 100 ml/m³ ♦ EG-Index 603-006-00-7 ♦ GGVSE/ADR 3 III UN1105 ♦ IATA 3 III UN1105 ♦ EINECS 204-633-5 ♦ WGK 1L ♦ HS 29051490

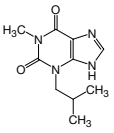
DNase, RNase, Proteases not detected. Suitable for use in nucleic acid purification. Isoamyl alcohol prevents foaming during nucleic acid extraction with Phenol:Chloroform:Isoamyl alcohol.

Assay (total isomers, GC)	min. 99.0 %
Water (KF)	max. 0.3 %

References:
1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (E.3-E.4)

Cat.No.	Size
39557.01	250 ml

3-Isobutyl-1-methylxanthine research grade



(IBMX)
$C_{10}H_{14}N_4O_2$ ♦ M_r 222.2 ♦ CAS [28822-58-4]

EINECS 249-259-3 ♦ HS 29335995

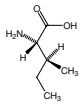
Inhibitor of cAMP-phosphodiesterase. Soluble in ethanol.

Assay (HPLC)	min. 98.0 %
MP	200 - 203 °C

References:
1. Ashcroft, S.J.H. et al. (1973) FEBS Lett. ***20,*** 263-6

Cat.No.	Size
26445.02	500 mg

L-Isoleucine research grade, Ph. Eur., USP



((2S, 3S)-2-Amino-3-methylpentanoic acid; 2-amino-3-methylvaleric acid; ILE)
$C_6H_{13}NO_2$ ♦ M_r 131.17 ♦ CAS [73-32-5]

EINECS 200-798-2 ♦ WGK 1L ♦ HS 29224985

Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
26540.03	100 g
26540.06	500 g

Isopropanol molecular biology grade

(2-Propanol)
C_3H_8O ♦ M_r 60.09 ♦ CAS [67-63-0]

DANGER
H225-H319-H336 ♦ MAK/TRK 500 mg/m³; 200 ml/m³ ♦ EG-Index 603-117-00-0 ♦ GGVSE/ADR 3 II UN1219 ♦ IATA 3 II UN1219 ♦ EINECS 200-661-7 ♦ WGK 1L ♦ HS 29051200

Suitable for the precipitation of nucleic acids. When compared to ethanol 50 % less is required for nucleic acid precipitation.

Purity (GC)	min. 99.7 %
Water	max. 0.1 %

References:
1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning,
2. Cold Spring Harbor Laboratory Press (E.13-E.14)

Cat.No.	Size
39559.01	250 ml
39559.02	1 L

Isopropanol analytical grade

(2-Propanol)
C_3H_8O ♦ M_r 60.1 ♦ CAS [67-63-0]

DANGER
H225-H319-H336 ♦ EG-Index 603-117-00-0 ♦ GGVSE/ADR 3 II UN1219 ♦ IATA 3 II UN1219 ♦ EINECS 200-661-7 ♦ WGK 1 L ♦ HS 29051200

Polar organic solvent commonly used in chemistry and molecular biology laboratories. It will dissolve a wide range of chemicals and evaporates quickly.

Assay (GC)	min. 99.7 %
Density (20 °C)	0.784 - 0.788 g/ml
Water	max. 0.1 %
Free acid	max. 20 ppm
Residue on evaporation	max. 10 ppm

Cat.No.	Size
45629.01	1 L
45629.02	2,5 L

Isopropanol for LC-MS

CAS [67-63-0]

DANGER
H225-H319-H336 ♦ EG-Index 603-117-00-0 ♦ GGVSE/ADR 3 II UN1219 ♦ IATA 3 II UN1219 ♦ EINECS 200-661-7 ♦ WGK 1 L ♦ HS 29051200

Special grade for excellent performance in liquid chromatography-mass spectrometry (LC-MS).

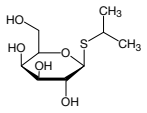
Assay (GC)	min. 99.95 %
Refractive index (20 °C)	1.375 - 1.379
Acidity	≤ 0.0010 %
Alkalinity	≤ 0.0005 %
Water (KF)	≤ 200 ppm
Residue on evaporation	≤ 2 ppm
Transmittance	
220 nm	min. 64.0 %
230 nm	min. 80.0 %
260 nm	min. 98.5 %
HPLC gradient 254 nm	max. 2 mAU
Test LC-MS TIC (50 – 2000 m/z) ES I(+)	
Sensitive impurities (reserpine)	max. 100 ppb
Metal Compounds	max. 50 ppb

Microfiltered, 0.1 µm

Cat.No.	Size
45636.01	1 L
45636.02	2,5 L

Isopropyl-β-D-thiogalactopyranoside research grade, dioxane-free

(IPTG; Isopropyl-1-thio-β-D-galactopyranoside)
$C_9H_{18}O_5S$ ♦ M_r 238.3 ♦ CAS [367-93-1]



EINECS 206-703-0 ♦ WGK 1 ♦ HS 29389090
Storage temperature -15 °C to -25 °C

Analog of galactose, not split by β-galactosidase.
Inducer of the lac operon in bacteria. Used in conjunction with X-Gal (5-bromo-4-chloro-indolyl-β-D-galactoside, cat. no. 15243) for detection of lac⁺ colonies. Dissolve in H_2O to 200 mg/ml, sterilize by filtration and store in aliquots at -20 °C. For detection of transformants, use in final concentration of 0.1 mM.

Assay (HPLC)	min. 98.0 %
[α] 20 °C/D (c=1 in water)	-28.5 ° to -34.5 °
1,4-Dioxane	not detected

References:
1. Donner, J. et al. (1982) J. Biol. Chem. ***257,*** 14826-9
2. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (4.33, 4.37-4.38, 1.8-1.9, 17.12-17.13, B.11)
3. Ed. Ausubel et al. (1994) Current Protocols in Molecular Biology, Massachusetts General Hospital & Harvard Medical School (1.4.3, 16.2.3, 1.15.1)

Cat.No.	Size
26600.03	1 g
26600.04	10 g
26600.06	50 g

Kanamycin acid sulfate research grade, BP

$C_{18}H_{36}N_4O_{11}\cdot 1.7\ H_2SO_4$ ♦ M_r 651.2

HS 29419000
Storage temperature +2 °C to +8 °C

Min. 670 U/mg. Kanamycin acid sulfate is a form of kanamycin sulfate prepared by adding sulfuric acid to a solution of kanamycin sulfate and drying by a suitable method. Sulfate content: 23 - 26 %, compared to 15 - 17 % in kanamycin sulfate.

References:
1. Pestka, S. (1971) Annu. Rev. Microbiol. ***25,*** 487-562
2. Mays, D. et al. (1976) J. Chromatogr. ***120,*** 193-202
3. ***Review:***
Cox, D. et al. (1977) in: Sammes, P.G. (ed.) Topics in antibiotic chemistry, vol. ***3***, Chichester, Horwood pp. 1-90
4. Lancini, G. & Parenti, F. (1982) Antibiotics: Springer, New York
5. Spena, A. a. Schell, J. (1987) Mol. Gen. Genetics ***206***, 436-40
6. Busch, M. et al. (2002) Plant Physiol. ***128***, 439-53

Cat.No.	Size
26898.02	5 g
26898.03	25 g

Kanamycin sulfate research grade

CAS [25389-94-0]

DANGER
H360D ♦ EG-Index 246-933-9 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

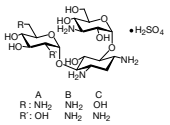
Aminoglycoside antibiotic, inhibitor of protein biosynthesis. It is active against gram negative and gram positive bacteria. Main component is Kanamycin A. Suitable for prevention of bacterial contamination in cell culture.
Activity: min. 750 U/mg. Easily soluble in water.
Stock solution: 10 mg/ml in H_2O, working solution: 100 µg/ml

References:
1. Pestka, S. (1971) Annu. Rev. Microbiol. ***25***, 487-562
2. Lancini, G. & Parenti, F. (1982) Antibiotics: Springer, New York
3. Vetting, M.W. et al. (2002) Nature Struct. Biol. ***9,*** 653-8
4. Lambert, C. et al. (2003) Environm. Biol. ***5***, 127-32
5. Kataoka, T. et al. (2004) Plant Physiol. ***136***, 4198-204

Cat.No.	Size
26897.01	5 g
26897.02	25 g
26897.03	100 g

Kanamycin sulfate molecular biology grade, Ph. Eur.

$C_{18}H_{36}N_4O_{11}\cdot H_2SO_4\cdot H_2O$ ♦ M_r 600.6 ♦ CAS [25389-94-0]



DANGER
H360D ♦ EINECS 246-933-9 ♦ WGK 1 ♦
HS 29419000
Storage temperature +2 °C to +8 °C

Aminoglycoside antibiotic, inhibitor of protein biosynthesis. It is active against gram negative and gram positive bacteria. Main component is Kanamycin A. Suitable for prevention of bacterial contamination in cell culture. Used in molecular biology for the selection of resistant bacteria.
Activity: min. 750 U/mg. Easily soluble in water.
Stock solution: 10 mg/ml in H_2O, working solution: 100 µg/ml.

References:
1. Pestka, S. (1971) Annu. Rev. Microbiol. ***25,*** 487-562
2. Mays, D. et al. (1976) J. Chromatogr. ***120,*** 193-202
3. Cox, D. et al. (1977) in: Sammes, P.G. (ed.) Topics in Antibiotic Chemistry, vol. ***3***, Chichester, Horwood pp. 1-90
4. Lancini, G. & Parenti, F. (1982) Antibiotics: Springer, New York
5. Nakashima, K. et al. (1999) . J. Biol. Chem. ***274***, 27786-92
6. Vetting, M.W. et al. (2002) Nature Struct. Biol. ***9***, 653-8
7. Lambert, C. et al. (2003) Environm. Biol. ***5,*** 127-32
8. Kataoka, T. et al. (2004) Plant Physiol. ***136***, 4198-204

Cat.No.	Size
26899.01	1 g
26899.02	5 g
26899.03	25 g

Kerosene, low odor

CAS [8008-20-6]

DANGER
H304 ♦ EG-Index 649-404-00-4 ♦ EINECS 232-366-4 ♦ WGK 1 ♦
HS 27101925

Suitable as cooling fluid in horizontal electrophoresis.

Cat.No.	Size
26945.01	1 L

LabImage 1D L-320 Gel Analysis

HS 90279050

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.
LabImage 1D L-320 is the basic verison for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.
LabImage 1D Gel Analysis Software - your tool in 1D gel analysis

- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- As single and network license available

This version is for academic only. For corporate usage please ask for L-320-C

Cat.No.	Size
L-320-A	1 piece

LabImage 1D L-320 Gel Analysis

HS 90279050

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.
LabImage 1D L-320 is the basic verison for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.
LabImage 1D Gel Analysis Software - your tool in 1D gel analysis

- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- As single and network license available

This version is for corporate only. For academic usage please ask for L-320-A

Cat.No.	Size
L-320-C	1 piece

LabImage 1D L-340 Gel Analysis

HS 90279050

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.
LabImage 1D L-340 is the advanced verison for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.
Moreover it includes grimace correction, Rf calibration and correction of multiple standards, can normalize not only single band but group of bands and has an additional export report to RFT and XLS. An additional module allows FDA 21 CFR Part 11 compliance.
LabImage 1D Gel Analysis Software - your tool in 1D gel analysis

- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- Compliant with FDA21 CFR part 11 (module required)
- As single and network license available

This version is for academic only. For corporate usage please ask for L-340-C

Cat.No.	Size
L-340-A	1 piece

LabImage 1D L-340 Gel Analysis

HS 90279050

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.
LabImage 1D L-340 is the advanced verison for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.
Moreover it includes grimace correction, Rf calibration and correction of multiple standards, can normalize not only single band but group of bands and has an additional export report to RFT and XLS. An additional module allows FDA 21 CFR Part 11 compliance.
LabImage 1D Gel Analysis Software - your tool in 1D gel analysis

- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- Compliant with FDA21 CFR part 11 (module required)
- As single and network license available

This version is for corporate only. For academic usage please ask for L-340-A

Cat.No.	Size
L-340-C	1 piece

LabImage 1D L-360-A Gel Analysis

HS 90279050

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.
LabImage 1D L-360 is the advanced version for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.
Moreover it includes grimace correction, Rf calibration and correction of multiple standards, can normalize not only single band but group of bands and has an additional export report to RFT and XLS. An additional module allows FDA 21 CFR Part 11 compliance. As these functions are shared with the L-340, additionally the L-360 version could detect multiple regions of interest (ROIs) and is fully automatable (create and edit macros for automation, apply macros to single image or image stack).
LabImage 1D Gel Analysis Software - your tool in 1D gel analysis.

- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- Compliant with FDA21 CFR part 11 (module required)
- As single and network license available

This version is for academic only. For corporate usage please ask for L-360-C

Cat.No.	Size
L-360-A	1 piece

LabImage 1D L-360-C Gel Analysis

HS 90279050

LabImage 1D gel analysis (LabImage 1D) is a flexible solution with strong image analysis algorithms, applicable also for DNA or protein testing and western blotting techniques. Due to its workflow-based concept, this application has become a prime example of software usability. Based on the latest technology, this application works with both Mac and the latest Windows versions and requires no special user training.
LabImage 1D L-360 is the advanced version for standard 1D analysis of protein and nucleic acid gels. It allows import of common image types or import of images from scanner or camera, automatic lane and band detection, manual lane and band correction, calculation of MW, Rf, area, band volume, background reduction, creation of own MW or pI standard as well as multiple standards for one gel and has many different report and export functions.
Moreover it includes grimace correction, Rf calibration and correction of multiple standards, can normalize not only single band but group of bands and has an additional export report to RFT and XLS. An additional module allows FDA 21 CFR Part 11 compliance. As these functions are shared with the L-340, additionally the L-360 version could detect multiple regions of interest (ROIs) and is fully automatable (create and edit macros for automation, apply macros to single image or image stack).
LabImage 1D Gel Analysis Software - your tool in 1D gel analysis.

- Full 16 bit image processing
- Intuitive User Interface/Workflow
- Runs under Windows, Mac OS X, Linux
- Compliant with FDA21 CFR part 11 (module required)
- As single and network license available

This version is for corporate only. For academic usage please ask for L-360-A.

Cat.No.	Size
L-360-C	1 piece

Laemmli Buffer 10x, for SDS PAGE

HS 38220000

Running buffer for SDS PAGE. Supplied as 10 x concentrate. Contains 0.25 M Tris, 1.92 M glycine and 1 % SDS in aqueous solution.

Cat.No.	Size
42556.01	2 L
42556.04	10 L

Laemmli Sample Buffer 2x, for SDS PAGE

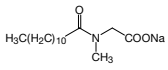
HS 38220000
Storage temperature +2 °C to +8 °C

Sample buffer for SDS PAGE. Supplied as 2x concentrate. Contains 126 mM Tris/Cl (pH 6.8), 20 % glycerol, 4 % SDS and 0.02 % bromophenol blue.

Cat.No.	Size
42526.01	20 ml
42526.02	5 x 20 ml

N-Lauroylsarcosine·Na-salt 30 % solution

(Sarkosyl NL-30; Oramix L30)
$C_{15}H_{28}NO_3Na$ ♦ M_r 293.4



DANGER
H315-H318 ♦ WGK 1 ♦ HS 38089490

Disinfectant. Active substance 28.5 - 32.0 %.

pH (3 % in water) 7.5 - 8.5

Cat.No.	Size
27570.01	500 ml
27570.02	5 L

Lauryl-β-D-maltoside

see 20780 Dodecyl-β-D-maltoside, page 41

LB Agar (Lennox), powder 35 g for 1 liter medium

HS 38210000

For cultivation of *E. coli* in molecular biology.
10 g/l Tryptone
5 g/l Yeast extract
5 g/l NaCl
15 g/l Agar
For making 1 L liquid medium suspend 35 g in 900 ml distilled water, adjust the pH to 7.0 with approximately 0.2 ml of 5 N NaOH, fill up to a final volume of 1 L with deionized water and sterilize by autoclaving. Cool to 45 °C prior to dispensing into sterile petri dishes.

References:

1. Luria, S.E., et al., Virology ***12***, 348-390 (1960)
2. Miller, J.H., Experiments in Molecular Genetics, p. 433, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY 1972

Cat.No.	Size
48502.01	700 g

LB Medium (Lennox), powder 20 g for 1 liter medium

WGK 1 ♦ HS 38210000

For cultivation of *E. coli* in molecular biology.
10 g/l Tryptone
5 g/l Yeast extract
5 g/l NaCl
For making 1 L liquid medium suspend 20 g in 900 ml distilled water, adjust the pH to 7.0 with approximately 0.2 ml of 5 N NaOH, fill up to a final volume of 1 L with deionized water and sterilize by autoclaving.

References:

1. Luria, S.E., et al., Virology ***12***, 348-390 (1960)
2. Miller, J.H., Experiments in Molecular Genetics, p. 433, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY 1972

Cat.No.	Size
48501.01	500 g

Lectin from *Canavalia ensiformis* lyophil.

(Concanavalin A from jack bean)
M_r 110 000 ♦ CAS [11028-71-0]

DANGER
H317-H334 ♦ EINECS 234-258-2 ♦ WGK 1 ♦ HS 35040090
Storage temperature +2 °C to +8 °C

Mitogenic lectin purified from the jack bean, *C. ensiformis*, that selectively cross-links cell-surface glycoproteins and affects the initiation of cell agglutination, mitogenesis, and apoptosis. Concanavalin A (ConA) binds to D-glucose, D-mannose and sterically related sugars in glycoproteins, and glycolipids and has been used in affinity chromatography purifications of various glycoproteins and cellular structures (1).
It has potential anticancer effects due to mitogenic activity with lymphocytes and cancer cells (2). When administered, concanavalin A binds to glycoproteins of the cell membrane, inducing autophagy when it eventually enters the cell. Simultaneously, it triggers inflammation of tumorous cells, causing an immune response targeted against those cells. This simultaneous induction of immune response and autophagy makes it a potentially potent and novel cancer treatment. It is also used for studies of immune regulation across various cell types

Sugar specificity: D-glucose, D-mannose and sterically related sugars
Hemagglutination: Reference (3)

References:

1. Bessler, W. & Goldstein, I.J. (1973) FEBS Lett. ***34,*** 58-62
2. Lin, H. et al. (1975) Cancer Chemother. Rep. ***59,*** 319-26
3. Wang, J.L. et al. (1975) J. Biol. Chem. ***250,*** 1490-1502

Cat.No.	Size
27648.01	100 mg
27648.03	1 g

Lecithin from egg yolk pure

CAS [93685-90-6]

EINECS 297-639-2 ♦ HS 29232000
Storage temperature -15 °C to -25 °C

Phosphatidylcholine belongs to the class of glycerophospholipids and contains choline as the head-group. It is the major phospholipid found in eukaryotic organism.

Phosphatidyl choline	min. 70.0 %
Iodine number	min. 63 - 69
Peroxide value	max. 5

Cat.No.	Size
27608.01	25 g
27608.02	100 g
27608.03	500 g

Lecithin from soybean

(Vegetable lecithin)
HS 29232000
Storage temperature +2 °C to +8 °C

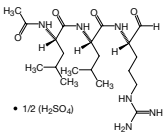
Phosphatidylcholine belongs to the class of glycerophospholipids and contains choline as the head-group. It is the major phospholipid found in eukaryotic organism.

Phosphatidyl choline	min. 17.0 - 25.0 %
Acetone insol. substances	min. 96.5 %
Toluol insoluble substances	max. 0.3 %

Cat.No.	Size
57556.01	100 g
57556.02	1 kg

Leupeptin

(Acetyl-L-leucyl-L-leucyl-L-argininal)
$C_{20}H_{38}N_6O_4 \cdot 1/2H_2SO_4$ ♦ M_r 475.6 ♦ CAS [103476-89-7]



WARNING
H302-H332 ♦ WGK 1 ♦ HS 29241900
Storage temperature -15 °C to -25 °C

Inhibitor of serine and cysteine proteases.

Assay (HPLC) (sum of tautomeric isomers)	min. 96.5 %

References:

1. Umezawa, H. (1976) Methods Enzymol. ***45,*** 678-83
2. Carlin, C. et al. (1994) J. Cell. Physiol. ***160,*** 427-34
3. Savory, P.J. & Rivett, A.J. (1993) Biochem. J. ***289,*** 45-8
4. Eto, I. & Bandy, M.D. (1990) Mol. Cell. Biochem. ***94,*** 19-36
5. Benistani, B. et al. (1994) Biochim. Biophys. Acta ***1223,*** 84-90

Cat.No.	Size
51867.02	10 mg
51867.03	50 mg

Levulose

see 21830 D-Fructose, page 50

Lid with 3 Electrodes for Bi-Directional Electrophoresis

HS 90272000

Cat.No.	Size
HPE-3EL	1 piece

Lowry Assay Kit

DANGER
H314-H412 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

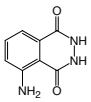
The assay bases on Lowry's method (1). It contains ready-to-use reagents and protein standard. The assay is fast and has a sensitivity of 50 µg protein/ml.
Sufficient for 250 2-ml assays.

References:

1. Lowry O. H., et al. (1951) J. Biol. Chem ***193***, 265 – 275

Cat.No.	Size
39236.01	250 tests

Luminol research grade



(3-Aminophthalhydrazine;
5-Amino-2,3-dihydro-1,4-phthalazinedione)
$C_8H_7N_3O_2$ ♦ M_r 177.2 ♦ CAS [521-31-3]

WARNING
H302-H332 ♦ EINECS 208-309-4 ♦ WGK 1 ♦
HS 29280090

For microdetermination of superoxide dismutase (2). Peroxidase reagent (1).

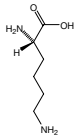
Assay (titr.) min. 95.0 %

References:

1. Freeman, T.M. & Seitz, W.R. (1978) Anal. Chem. ***50,*** 1242-6
2. Huu, T.P. et al. (1984) Anal. Biochem. ***142,*** 467-2
3. Roswell, D.F. & White, E.H. (1978) Methods Enzymol. ***57,*** 409-23
4. Leong, M.M. L. & Fox, G.R. (1990) Methods Enzymol. ***184,*** 442-51

Cat.No.	Size
28085.02	5 g

L-Lysine cryst. reseach grade



(Lys; L-2,6-Diaminohexanoic acid; 2,6-Diaminocaproic acid)
$C_6H_{14}N_2O_2 \cdot H_2O$ ♦ M_r 164.21 ♦ CAS [39665-12-8]

EINECS 200-294-2 ♦ WGK 1L ♦ HS 29224100
Storage temperature +2 °C to +8 °C

Essential amino acid used as a supplement in cell culture media, a substrate for enzymes and as a component of poly-lysine polymers, which facilitate the attachment of cells to plastic and glass surfaces.

Assay (titr.) min 98.0 %
Heavy metals (Pb) max. 10 ppm

Cat.No.	Size
28195.01	25 g
28195.02	100 g
28195.03	500 g

Lysozyme from chicken egg white min. 15 000 units/mg cryst.

(Muramidase; Mucopeptide-glycohydrolase; Mucopeptide N-acetylmuramoylhydrolase)
EC 3.2.1.17 ♦ M_r ca. 14 400 ♦ CAS [12650-88-3]

DANGER
H334 ♦ EINECS 235-747-3 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Crystalline powder in hydrochloride form. Lysozyme hydrolyzes the β 1 → 4 linkages of the murein between N-acetylmuramic acid and N-acetyl-D-glucosamin, and degrades the heteroglycan chain to disaccharides. This reaction leads to cell lysis in most gram positive bacteria. Lysis can be prevented if the reaction is performed in an isotonic sucrose medium. Under these assay conditions protoplasts are produced which no longer have a cell wall. In gram negative bacteria a compact lipopolysaccharide layer on the exposed murein sacculus efficiently shields them from lysozyme digestion. Only when the stabilizing Ca^{2+} ions are removed by treatment with e.g. EDTA, the murein becomes susceptible to lysozyme. Suitable for hydrolysis of bacterial cell walls and of proteoglycans (1, 2).

Unit definition: 1 unit catalyzes a decrease in absorption at 450 nm of 0.001 per minute at 25 °C, pH 6.24, in a suspension of *Micrococcus lysodeikticus* as substrate.

Isoelectric point: 10.5 - 11.0

Optimum pH: 9.2

References:

1. Imoto, T. et al. (1972) The Enzymes VII, 3rd Ed. (Boyer, P.D., ed.) Acad. Press N.Y. 666-70
2. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (1.22, 1.34, 1.36, 1.38, 17.38, 1.29, B.17)

Cat.No.	Size
28263.01	2,5 g
28263.02	10 g

Lysyl Endopeptidase®, MS approved

EC 3.4.21.50 ♦ CAS [72561-05-08]

EINECS 276-716-4 ♦ HS 35079090
Storage temperature -15 °C to -25 °C ✻✻

Approved quality for use with in-gel digestion and mass spectrometric analysis.

Lysyl Endopeptidase, originally isolated from the soil bacterium discovered by Masaki, et al. cleaves specifically the peptide bonds at the carboxy-terminal side of Lysine residues and S-aminoethylcysteine residues with a high degree of specificity, making it a valuable tool for protein sequence analysis and for proteome research. An added feature of Lysyl Endopeptidase is its ability to retain complete activity after incubation in 4M urea or in 0.1 % SDS solution for up to 6 hours at 30 °C.

Cat.No.	Size
20987.01	20 µg

Macerozyme from *Rhizopus sp.* lyophil.

EC 3.2.1.15 ♦ CAS [9032-75-1]

DANGER
H334 ♦ EINECS 232-885-6 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Macerating enzyme suitable for enzymatic digestion of plants.

Activities: Pectinase ca. 1 U/mg
Unit definition: 1 U catalyzes the liberation of 1 µmole of reducing groups from pectic acid per minute at 25 °C, pH 4.5 calculated as galacturonic acid. Reducing groups determined with alkaline copper reagent (1).
Hemicellulase: ca. 0.5 U/mg
Unit definition: 1 U is equivalent to 1 µmole of reducing groups released from beechwood xylan per hour at 37 °C, pH 5.5, calculated as xylose.
Cellulase: ca. 0.1 U/mg
Unit definition: 1 U catalyzes the liberation of 1 µmole glucose from sodium carboxymethyl cellulose per minute at 40 °C, pH 4.5; glucose determined with alkaline copper reagent (2).
pH optimum: 3.5 - 7.0
Temperature optimum: 40 - 50 °C

References:

1. Barraclough, R. & Ellis, R.J. (1979) Eur. J. Biochem. ***94,*** 165-77
2. Okada, G. (1988) Methods Enzymol. Vol. ***160***, 259-63

Cat.No.	Size
28303.01	2,5 g
28303.02	10 g
28303.03	50 g

Macerozyme R-10 from *Rhizopus sp.* lyophil.

(»Macerating Enzyme«; »Cell Separating Enzyme«)
EC 3.2.1.15 ♦ CAS [9032-75-1]

DANGER
H334 ♦ EINECS 232-885-6 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Macerozyme R-10 is suitable for the isolation of plant cells, and can be used in combination with cellulase »Onozuka R-10« (cat. no. 16419) (1, 2) and with cellulase »Onozuka RS« (cat. no. 16420).

Activities: Pectinase ca. 0.5 U/mg
Unit definition: 1 U catalyzes the liberation of 1 µmole of reducing groups from pectic acid per minute at 25 °C, pH 4.5 calculated as galacturonic acid. Reducing groups determined with alkaline copper reagent (2).
Hemicellulase: ca. 0.25 U/mg
Unit definition: 1 U is equivalent to 1 µmole of reducing groups released from beechwood xylan per hour at 37 °C, pH 5.5, calculated as xylose.
Cellulase: ca. 0.1 U/mg
Unit definition: 1 U catalyzes the liberation of 1 µmole glucose from sodium carboxymethyl cellulose per minute at 40 °C, pH 4.5; glucose determined with alkaline copper reagent (3).
pH optimum: 3.5 - 7.0
Temperature optimum: 40 - 50 °C.

References:

1. Yamada, Y. et al. (1972) Agr. Biol. Chem. ***36,*** 1055-9
2. Barraclough, R. & Ellis, R.J. (1979) Eur. J. Biochem. ***94,*** 165-77
3. Okada, G. (1988) Methods Enzymol. Vol. ***160,*** 259-63

Cat.No.	Size
28302.02	2,5 g
28302.03	10 g

Macrogol

see 33136 Polyethylene glycol 4000, page 90

Magenta O

see 31627 Parafuchsin, page 86

Magnesium chloride·6H$_2$O molecular biology grade

$MgCl_2 \cdot 6H_2O$ ♦ M_r 203.3 ♦ CAS [7791-18-6]

HS 28273100

DNase/RNase not detected.

Assay (titr., hydrate)	98.0 - 101.0 %
Heavy metals (Pb)	max. 0.001 %

Cat.No.	Size
39771.01	500 g

Magnesium chloride, solution 1 M molecular biology grade

HS 38220000

Magnesium chloride is used as a source of magnesium ions in various molecular biology applications like PCR reactions and for the preparation of competent cells for transformation. It is an essential co-factor in many enzymes, including DNase, some restriction enzymes, and Ribonuclease H. DNase/RNase not detected.

Composition:

$MgCl_2 \cdot 6H_2O$ (cat. no. 39771)	203.30 g/l

Cat.No.	Size
39772.01	100 ml
39772.02	500 ml

Magnesium sulfate heptahydrate molecular biology grade

$MgSO_4 \cdot 7H_2O$ ♦ M_r 246.48 ♦ CAS [10034-99-8]

EG-Index 231-298-2 ♦ WGK 1 ♦ HS 28332100

DNase/RNase not detected.

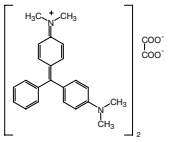
Assay (titr.)	min. 99.5 %
Heavy metals (as Pb):	max. 0.001 %
Chloride (Cl)	max. 0.0005 %

Cat.No.	Size
39773.01	100 g
39773.02	500 g

Malachite green oxalate research grade

(Basic Green 4)

C.I.42000 ♦ $(C_{23}H_{25}N_2^+)_2 \cdot C_2O_4^{2-} \cdot 2C_2H_2O_4$ ♦ M_r 927 ♦



CAS [2437-29-8]

DANGER

H302-H318-H361d-H400-H410 ♦ EG-Index 602-096-00-5 ♦ GGVSE/ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦ EINECS 219-441-7 ♦ WGK 3L ♦ HS 32041300

Suitable for bacteriology and histological staining. For fifty-fold amplification of the Lowry protein assay.

λ max. 0.0001 % in H_2O	618 ±2 nm

References:

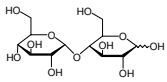
1. Sargent, M.G. (1987) Anal. Biochem. ***163,*** 476-81

Cat.No.	Size
28335.03	25 g

D-Maltose research grade

(Maltobiose; 4-O-α-D-Glucopyranosyl-D-glucopyranose)

$C_{12}H_{22}O_{11} \cdot H_2O$ ♦ M_r 360.32 ♦ CAS [6363-53-7]



EINECS 200-716-5 ♦ WGK 1 ♦ HS 17029010

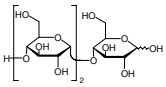
Used as a substrate for enzymes like maltases, transferases, ATPases, phosphorylases and to study maltose-binding proteins and disaccharide transport systems. It is as well a media supplement for culturing *E. coli* and yeast.

Assay (HPLC)	min. 92.0 %
[α] 20 °C/D (c=5 % in water)	135 ° - 137 °
Heavy metals (Pb)	max. 5 ppm

Cat.No.	Size
28390.01	50 g
28390.02	250 g

Maltotriose pure

$C_{18}H_{32}O_{16}$ ♦ M_r 504.44 ♦ CAS [1109-28-0]



EINECS 214-174-2 ♦ WGK 1 ♦ HS 29400000

Inducer of the maltose regulon of *E. coli*

Assay (HPLC) min. 90.0 %

Cat.No.	Size
28395.01	250 mg
28395.02	1 g

Mammalian Membrane Protein Extraction Kit

HS 38220000

Storage temperature +2 °C to +8 °C

The Mammalian Membrane Protein Extraction Kit provides a fast and efficient method to extract membrane proteins from mammalian cells and tissues. Native proteins can be obtained within 70 minutes without ultracentrifugation. Up to 90 % efficiency for membrane proteins which have at least 1 – 2 transmembrane domains. The extracted proteins are suitable for SDS PAGE, Western Blot, ELISA, and other functional assays.

Cat.No.	Size	EUR
39242.01	1 kit	296,00

Mammalian Nuclear and Cytoplasmic Protein Extraction Kit

HS 38220000

Storage temperature +2 °C to +8 °C

The Mammalian Nuclear and Cytoplasmic Protein Extraction Kit provides a fast and efficient method to extract nuclear and cytoplasmic proteins from mammalian cells and tissues. Native proteins can be obtained within 80 minutes without ultracentrifugation. The extracted proteins are suitable for SDS PAGE, Western Blot, ELISA, enzyme-activity assays, immunoprecipitation and other functional assays.

Cat.No.	Size
39243.01	1 kit

Mammalian Total Protein Extraction Kit

HS 38220000

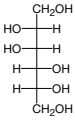
Storage temperature -15 °C to -25 °C

The Mammalian Total Protein Extraction Kit provides a fast and efficient method to extract total proteins (cytoplasmic, membrane and nuclear proteins) from mammalian cells and tissues without ultracentrifugation. The extracted proteins are suitable for SDS PAGE, Western Blot, ELISA, and other functional assays.

Cat.No.	Size
39241.01	1 kit

D-Mannitol analytical grade, Ph. Eur.

$C_6H_{14}O_6$ ♦ M_r 182.2 ♦ CAS [69-65-8]

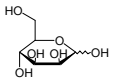


EINECS 200-711-8 ♦ WGK 1 ♦ HS 29054300

Assay (HPLC)	98.0 - 102.0 %
Reducing sugars	max. 0.2 %

Cat.No.	Size
28410.02	250 g
28410.03	1 kg

D-Mannose research grade



(Carubinose; Seminose)
$C_6H_{12}O_6$ ♦ M_r 180.2 ♦ CAS [3458-28-4]

HS 29400000

For biochemistry, microbiology and cell culture.

Assay (HPLC)	min. 99.7 %
MP	128 - 134 °C

Cat.No.	Size
28460.02	50 g

Maxi Columns

HS 39233010

For purification by gravity flow using 2 - 6 ml resin. Polypropylene columns containing a polyethylene frit with a nominal pore size of 20 µm.
Capacity: 35 ml

Cat.No.	Size
42175.01	50 columns

MEMBRA-CEL® dialysis tubing, MWCO 3500

RC, diameter 16 mm

HS 39173200

Packed dry , made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Nominal dry flat width	25 mm
Nominal dry diameter	16 mm
Approx. filling volume	2.0 ml/cm
Nominal dry wall thickness	25 µm

Cat.No.	Size
44310.01	5 m
44310.02	30 m

MEMBRA-CEL® dialysis tubing, MWCO 3500

RC, diameter 22 mm

HS 39173200

Packed dry , made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Nominal dry flat width	34 mm
Nominal dry diameter	22 mm
Approx. filling volume	3.4 ml/cm
Nominal dry wall thickness	25 µm

Cat.No.	Size
44311.01	5 m
44311.02	30 m

MEMBRA-CEL® dialysis tubing, MWCO 7000

RC, diameter 16 mm

HS 39173200

Packed dry , made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Nominal dry flat width	25 mm
Nominal dry diameter	16 mm
Approx. filling volume	2.0 ml/cm
Nominal dry wall thickness	28 µm

Cat.No.	Size
44313.01	5 m
44313.02	30 m

MEMBRA-CEL® dialysis tubing, MWCO 7000

RC, diameter 22 mm

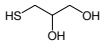
HS 39173200

Packed dry , made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Nominal dry flat width	34 mm
Nominal dry diameter	22 mm
Approx. filling volume	3.4 ml/cm
Nominal dry wall thickness	30 µm

Cat.No.	Size
44314.01	5 m
44314.02	30 m

3-Mercapto-1,2-propanediol



(Thioglycerol)
$C_3H_8O_2S$ ♦ M_r 108.16 ♦ CAS [96-27-5]

DANGER
H302-H311-H315-H319-H332-H335 ♦ GGVSE/ADR 6.1 III UN2810 ♦ IATA 6.1 III UN2810 ♦ EINECS 202-495-0 ♦ WGK 3L ♦
HS 29309099

Filled under argon.

Assay (GC)	min. 99.0 %

Cat.No.	Size
28637.01	50 ml

2-Mercaptoethanol electrophoresis grade

(Monothioethylene glycol)
C_2H_6OS ♦ M_r 78.13 ♦ CAS [60-24-2]

DANGER
H301-H310-H315-H317-H318-H331-H373-H410 ♦ GGVSE/ADR 6.1 II UN2966 ♦ IATA 6.1 II UN2966 ♦ EINECS 200-464-6 ♦ WGK 3L ♦ HS 29309099
Storage temperature +2 °C to +8 °C

Suitable for reducing protein disulfide bonds prior to polyacrylamide gel electrophoresis. Tested for use in sample buffers for SDS PAGE.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
28626.01	50 ml

2-Mercaptoethanol

(Monothioethylene glycol)
C_2H_6OS ♦ M_r 78.13 ♦ CAS [60-24-2]

DANGER
H301-H310-H315-H317-H318-H331-H373-H410 ♦ GGVSE/ADR 6.1 II UN2966 ♦ IATA 6.1 II UN2966 ♦ EINECS 200-464-6 ♦ WGK 3L ♦ HS 29309099
Storage temperature +2 °C to +8 °C

Used as a reducing agent in organic reactions and for retarding oxidation of biological compounds in solution.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
28625.01	50 ml
28625.02	500 ml

2-Mercaptoethanol molecular biology grade

(Monothioethylene glycol)
C_2H_6OS ♦ M_r 78.13 ♦ CAS [60-24-2]

DANGER
H301-H310-H315-H317-H318-H331-H373-H410 ♦ GGVSE/ADR 6.1 II UN2966 ♦ IATA 6.1 II UN2966 ♦ EINECS 200-464-6 ♦ WGK 3L ♦ HS 29309099
Storage temperature +2 °C to +8 °C

DNase/RNase not detected.

Assay (titr.)	min. 99.0 %

Cat.No.	Size
39563.01	50 ml
39563.02	500 ml

MES

see 29834 Morpholinoethane sulfonic acid, page 79

Metal Chelate Buffer Pack, includes 1 Buffer A and 1 Buffer B

HS 38220000

Contents:
250 ml 5 x PBS Buffer A
150 ml 1 x Imidazole Buffer B

Cat.No.	Size
42277.01	1 kit

Metal Chelate Midi Bulk Pack MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 24 x 1.6 ml Ni-IMAC columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 50 ml centrifuge tubes
Min. number of purifications: 48 purifications (2 uses per column)
Typical capacity/preparation: 10 - 15 mg 6 x His-tagged protein

Cat.No.	Size
42274.01	24 pieces

Metal Chelate Midi Kit - 8 MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 8 x 1.6 ml Ni-IMAC columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 50 ml centrifuge tubes
Min. number of purifications: 16 purifications (2 uses per column)
Typical capacity/preparation: 10 - 15 mg 6 x His-tagged protein
Vivaspin 20 ultrafiltration concentrators: 8
Buffers: 5 x PBS Buffer A, 1 x Imidazole Buffer B

Cat.No.	Size
42272.01	1 kit

Metal Chelate Midi Pack MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 8 x 1.6 ml Ni-IMAC columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 50 ml centrifuge tubes
Min. number of purifications: 16 purifications (2 uses per column)
Typical capacity/preparation: 10 - 15 mg 6 x His-tagged protein
Vivaspin 20 ultrafiltration concentrators: None
Buffers: 5 x PBS Buffer A, 1 x Imidazole Buffer B

Cat.No.	Size
42273.01	8 pieces

Metal Chelate Mini Bulk Pack Mini MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 72 x 0.23 ml Ni-IMAC columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microfuge tubes
Min. number of purifications: 144 purifications (2 uses per column)
Typical capacity/preparation: 1 mg 6 x His-tagged protein

Cat.No.	Size
42271.01	72 pieces

Metal Chelate Mini Kit - 24 Mini MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 24 x 0.23 ml Ni-IMAC columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microfuge tubes
Min. number of purifications: 48 purifications (2 uses per column)
Typical capacity/preparation: 1 mg 6 x His-tagged protein
Vivaspin 500 ultrafiltration concentrators: 24
Buffers: 5 x PBS Buffer A, 1 x Imidazole Buffer B

Cat.No.	Size
42269.01	1 kit

Metal Chelate Mini Pack Mini MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 24 x 0.23 ml Ni-IMAC columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microfuge tubes
Min. number of purifications: 48 purifications (2 uses per column)
Typical capacity/preparation: 1 mg 6 x His-tagged protein
Buffers: 5 x PBS Buffer A, 1 x Imidazole Buffer B

Cat.No.	Size
42270.01	24 pieces

Metal Chelate Mini Sample Kit - 4 Mini MC Plugs

HS 38220000

The Proteus IMAC kit is designed for simple, rapid His-tagged recombinant protein purification from a cell lysate under native or denaturing conditions. Proteus spin columns replace lengthy and expensive chromatographic methods such as FPLC. Metal chelate affinity chromatography is a rapid one-step purification, which removes most contaminants and can achieve purities close to homogeneity.

Contents:
Quantity: 4 x 0.23 ml Ni-IMAC columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microfuge tubes
Min. number of purifications: 8 purifications (2 uses per column)
Typical capacity/preparation: 1 mg 6 x His-tagged protein
Vivaspin 500 ultrafiltration concentrators: 4
Buffer: 5 x PBS Buffer A, 1 x Imidazole Buffer B

Cat.No.	Size
42268.01	1 kit

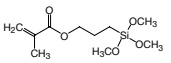
Metal Chelate Mini Sample Pack Mini MC Plug

HS 38220000

Cat.No.	Size
42267.01	1 piece

3-Methacryloxypropyltrimethoxysilane (Bind-Silane)

(Polyfix 1000; Bind-Silane)
$C_{10}H_{20}O_5Si$ ♦ M_r 248.4 ♦ CAS [2530-85-0]



WARNING
H315-H319-H335 ♦ EINECS 219-785-8 ♦ WGK 1 ♦ HS 29161400
Storage temperature +2 °C to +8 °C

Used to covalently attach polyacrylamide gels to the surface of glass plates. The gel stays firmly attached to the glass during staining and drying procedures.

Assay (GC) 98.0 - 100.0 %

Cat.No.	Size
28739.01	100 ml

Methanol analytical grade

CH_4O ♦ M_r 32.04 ♦ CAS [67-56-1]

DANGER
H225-H301-H311-H331-H370 ♦ EG-Index 603-001-00-X ♦ GGVSE/ADR 3 II UN1230 ♦ IATA 3 II UN1230 ♦ EINECS 200-659-6 ♦ WGK 1 L ♦ HS 29051100

Solvent used in biochemical applications, as fixative in immunfluorescence and histology and in transfer buffer for Western Blotting.
Suitable in combination with methanol for protein precipitation according to Wessel & Flügge (1).

Assay (GC)	min. 99.8 %
Density (20 °C)	0.7915
Water	max. 1000 ppm
Acidity	max. 20 ppm
Residue on evaporation	max. 10 ppm

References:
1. Wessel, D Flügge, U.I. (1984) Anal. Biochem. ***138***, 141-43

Cat.No.	Size
45631.01	1 L
45631.02	2,5 L

Methanol for HPLC

CH_4O ♦ M_r 32.0 ♦ CAS [67-56-1] $H_3C—OH$

DANGER
H225-H301-H311-H331-H370 ♦ MAK/TRK 200 ml/m³; 270 mg/m³ ♦ EG-Index 603-001-00-X ♦ GGVSE/ADR 3 II UN1230 ♦ IATA 3 II UN1230 ♦ EINECS 200-659-6 ♦ WGK 1L HS 29051100

Special grade for use as a mobile phase in chromatographic applications like reversed-phase liquid chromatography.

Assay	min. 99.8 % (GC)
Density (20 °C)	0.7910 - 0.7920
Boiling point	64.5 - 65.0 °C
Refractive Index	1.3310

Maximum Impurity Levels:

Water	max. 0.05 %
Acidity	max. 0.001 %
Residue on evaporation	max. 0.0005 %

Minimum Transmission Levels
1 cm cell compared against HPLC-water

210 nm	≧ 25.0 %
230 nm	≧ 70.0 %
240 nm	≧ 85.0 %
260 mm	≧ 98.0 %

Cat.No.	Size
45630.01	2,5 L

Methanol for UHPLC-MS

CH_4O ♦ M_r 32.0 ♦ CAS [67-56-1]

DANGER
H225-H301-H311-H331-H370 ♦ MAK/TRK 200 ml/m³; 270 mg/m³ ♦ EG-Index 603-001-00-X ♦ GGVSE/ADR 3 II UN1230 ♦ IATA 3 II UN1230 ♦ EINECS 200-659-6 ♦ WGK 1 L ♦ HS 29051100

Special grade for excellent performance in ultra high performance liquid chromatography-tandem mass spectrometry (UHPLC-MS/MS).

Assay (GC)	min. 99.99 %
Refractive index (20 °C)	1.3270 - 1.3300
Acidity	≤ 0.0003 meq/g
Alkalinity	≤ 0.00006 meq/g
Water (KF)	≤ 200 ppm
Residue on evaporation	≤ 1 ppm

Transmittance

210 nm	min. 40.0 %
225 nm	min. 70.0 %
230 nm	min. 80.0 %
≥ 260 nm	min. 98.0 %

Fluorescence (quinine)

254 nm	max. 1 ppb
365 nm	max. 1 ppb

UHPLC gradient peak

220 nm	max. 4 mAU
235 nm	max. 2 mAU
Drift at 220 nm	max. 30 mAU
Drift at 235 nm	max. 10 mAU

Test LC-MS TIC (50 – 2000 m/z)
ES I(+)

Sensitive impurities (reserpine)	max. 30 ppb

Metal Compounds

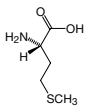
Na/K/Ca	max. 50 ppb
Al/Fe/Mg	max. 20 ppb

Microfiltered, 0.1 µm

Cat.No.	Size
45635.01	2,5 L

L-Methionine research grade, Ph. Eur.

(Met; L-2-Amino-4-(methylthio)butyric acid)
$C_5H_{11}NO_2S$ ♦ M_r 149.21 ♦ CAS [63-68-3]



EINECS 200-562-9 ♦ WGK 1L ♦ HS 29304010

Assay (titr.)	99.0 - 101.0 %
Heavy metals (Pb)	max. 10 ppm

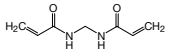
Cat.No.	Size
28821.01	25 g
28821.02	100 g

Methyl Violet 10B

see 27335 Crystal Violet, page 35

N,N'-Methylene bisacrylamide 2X analytical grade

(Bis(acrylamido)methane)
$C_7H_{10}N_2O_2$ ♦ M_r 154.2 ♦ CAS [110-26-9]



WARNING
H302 ♦ EINECS 203-750-9 ♦ WGK 2 ♦ HS 29241900
Storage temperature +2 °C to +8 °C

Cross-linking agent for making polyacrylamide gels for use in protein and nucleic acid electrophoresis.

Assay (titr.)	min. 98.0 %
A 290 nm/1 % in water	max. 0.25
pH 1 % in water	5.5 - 7.5

Cat.No.	Size
29195.02	50 g
29195.03	250 g

N,N'-Methylene bisacrylamide 2X solution 2 % (w/v)

WGK 1 ♦ HS 29241900
Storage temperature +2 °C to +8 °C

N,N'-Methylene bisacrylamide 2X solution. Solution contains 2 % (w/v) highly purified »Bis« in deionized water.

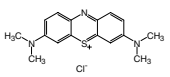
Cross-linking agent for making polyacrylamide gels for use in protein and nucleic acid electrophoresis.

A 290 nm 1:1 in water	ca. 0.25
pH 1:1 in water	6.0 - 8.0

Cat.No.	Size
29197.01	1 L

Methylene Blue

(Basic Blue 9; Methylene blue chloride; Methylthionine chloride)



C.I.52015 ♦ $C_{16}H_{18}N_3S^+ \cdot Cl^-$ ♦ M_r 319.86 ♦ CAS [61-73-4]

WARNING
H302 ♦ EINECS 200-515-2 ♦ WGK 2L ♦ HS 32049000

Standardized according to DIN 58981. Methylene blue is very sensitive to oxidation and usually contains demethylated products, called Azure A, B and C and thionine. For staining and detecting RNA in PAGE (as 0.1 % solution in water). Water soluble nuclear staining dye, mostly used for staining of blood cells.

λ max. (0.0001 % in water)	655 - 670 nm
A 1 cm/λ max./0.0001 % in water	min. 0.17

References:

1. Herrini & Schmidt (1988) Rapid, reversible staining of Northern Blots prior to hybridization. BioTechniques ***6***, 196

Cat.No.	Size
29198.01	25 g

Methylnadic anhydride pract.

(NMA; EPON hardener MNA; Methylnorbornene-2,3-dicarboxylic anhydride; Nadic methyl anhydride)
$C_{10}H_{10}O_3$ ♦ M_r 178.19 ♦ CAS [25134-21-8]

DANGER
H302-H315-H317-H318-H331-H334 ♦ GGVSE/ADR 6.1 II UN2810 ♦ IATA 6.1 II UN2810 ♦
EINECS 246-644-8 ♦ WGK 3 ♦ HS 29172000

Hardener component for polyester and epoxy resins, for example EPON embedding.

d20 °C	1.20 - 1.25
Refractive index	1.5040 - 1.5080

Cat.No.	Size
29452.01	100 ml
29452.02	250 ml
29452.03	1 L

Methylnorbornene-2,3-dicarboxylic anhydride

see 29452 Methylnadic anhydride, page 78

N-Methylphenazinium methylsulfate

see 32030 Phenazine·methosulfate, page 88

Methyltrioctyl ammonium chloride

see 37076 Trioctylmethylammonium chloride, page 150

Midi Columns

HS 39233010

For purification by gravity flow using 0.5 - 2 ml resin. Polypropylene columns containing a polyethylene frit with a nominal pore size of 20 µm.
Capacity: 12 ml

Cat.No.	Size
42174.01	50 columns

Mineral oil molecular biology grade

(Paraffin oil, low viscosity)
CAS [8042-47-5]

EINECS 232-455-8 ♦ WGK 1L ♦ HS 27101985

DNase/RNase not detected. Suitable for overlaying aqueous reactions and centrifuge gradients.

Cat.No.	Size
39776.01	50 ml

Mini Columns

HS 39233010

For purification by centrifugation using 100 - 250 µl resin. Polypropylene columns containing a polyethylene frit with a nominal pore size of 20 µm.
Capacity: 1.5 ml

Cat.No.	Size
42173.01	25 columns
42173.02	100 columns

Mini Pro 300 V

HS 90272000

Combining small size and versatility, the new Mini Pro 300 V power supply is an ideal choice for any researcher. The two terminators allow the simultaneous run of two eletrophoresis chambers, saving both time and valuable bench space. Capable of providing constant voltage or constant current in 1 V or 1 mA steps, the unit is perfectly suited to run both vertical polyacrylamide or horizontal agarose gel electrophoresis experiments.

- 300 V, 400 mA, 60 W output
- Two pairs of outlet terminals
- Time with alarm function
- Constant voltage or constant current options

Cat.No.	Size
MINI-300	1 piece

Mini Spin Columns

HS 39233010

For purification with syringe (luer lock system) or by centrifugation using 50 - 100 µl resin. Polypropylene columns containing a polyethylene frit with a nominal pore size of 35 µm.
Capacity: 0.8 ml

Cat.No.	Size
42176.01	25 columns

M9-Minimal salts 5x, powder 52.5 g for 1 liter medium

HS 38210000

For cultivation of *E. coli* and plasmid amplification in molecular biology
30 g/l Na_2HPO_4
15 g/l KH_2PO_4
5 g/l NH_4Cl
2.5 g/l NaCl
For making 1 L 5x concentrate dissolve 52.5 g in 1 L distilled water and sterilize by autoclaving. The 5x concentrate can be stored and diluted as needed to prepare 5 L of 1x M9 minimum salts.

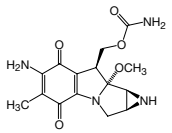
References:

1. Sambrook, J., et al., Molecular Cloning : A Laboratory Manual, 2nd ed., p. A.3, Cold Spring Harbor laboratory Press, Cold Spring Harbor, New York

Cat.No.	Size
48505.01	525 g

Mitomycin C lyophil. research grade

$C_{15}H_{18}N_4O_5$ ♦ M_r 334.3 ♦ CAS [50-07-7]



DANGER
H302-H351 ♦ EINECS 200-008-6 ♦
WGK 3L ♦ HS 29419000

Potent anti-tumor antibiotic isolated from *Streptomyces caespitosus*. Belongs to the group of aziridine-containing natural products. Causes intra- and interstrand crosslinks in DNA, which prevent dissociation of the strands, and thus inhibits replication and transcription of DNA. Each vial contains 48 mg sodium chloride as diluent.

References:

1. Tomasz, M. et al. (1987) Science ***235,*** 1204-8
2. de Klein, A. et al. (2000) Curr. Biol. ***10***, 479-82
3. Martin, T.W. et al. (2002) Structure ***10***, 933-42
4. Mai, Q. et al. (2007) Cell Res. ***17***, 1008-19

Cat.No.	Size
29805.01	2 mg

Mitsubishi Videoprinter P95DE

HS 90278080

Cat.No.	Size
P95DE.01	1 piece

Molecular Weight Markers for DNA

see 39314 SERVA DNA Standard 1 Kbp DNA Ladder lyophilized, page 113

Molecular Weight Markers for Proteins

see 39250 SERVA Unstained Protein Standard IV, page 123

Monothioethylene glycol

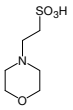
see 28626 2-Mercaptoethanol, page 75

MOPS

see 29836 Morpholinopropane sulfonic acid, page 879

Morpholinoethane sulfonic acid analytical grade

(MES)
$C_6H_{13}NO_4S$ ♦ M_r 195.24 ♦ CAS [4432-31-9]



EINECS 224-632-3 ♦ WGK 1L ♦ HS 29349990

pKa 20 = 6.15. Buffering substance for biochemistry and molecular biology (1). Physical constants (2).

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
260 nm	max. 0.1
280 nm	max. 0.1
pH 10 % in water	2.5 - 4.0

References:

1. Good, N.E. & Izawa, S. (1972) Methods Enzymol. ***24,*** 53-68
2. Sankar, M. & Bates, R.G. (1978) Anal. Chem. ***50,*** 1922-4

Cat.No.	Size
29834.02	100 g
29834.04	500 g
29834.03	1 kg

Morpholinoethane sulfonic acid, monohydrate analytical grade

(MES)
$C_6H_{13}NO_4S{\cdot}H_2O$ ♦ M_r 213.25 ♦ CAS [145224-94-8]

EINECS 224-632-3 ♦ HS 29349990

pKa 20 = 6.15. Buffering substance (1). Physical constants (2).

Assay (titr.)	min. 99.0 %
A 1 cm/0.1 M in water	
260 nm	max. 0.05
280 nm	max. 0.02
pH 1 % in water	2.5 - 4.0

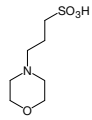
References:

1. Good, N.E. & Izawa, S. (1972) Methods Enzymol. ***24,*** 53-68
2. Sankar, M. & Bates, R.G. (1978) Anal. Chem. ***50,*** 1922-4

Cat.No.	Size
29830.03	1 kg

Morpholinopropane sulfonic acid analytical grade

(MOPS)
$C_7H_{15}NO_4S$ ♦ M_r 209.27 ♦ CAS [1132-61-2]



EINECS 214-478-5 ♦ WGK 1L ♦ HS 29349990

pKa 20 = 7.2. Buffering substance for biochemistry, molecular and cell biology. Buffer component for isoelectric focussing and SDS PAGE. Substitute for HCO_3^-/CO_2-buffer in cell culture for muscle studies.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
260 nm	max. 0.1
280 nm	max. 0.08
pH 10 % in water	3.0 - 5.0

References:

1. Good, N.E. & Izawa, S. (1972) Methods Enzymol. ***24,*** 53-68

Cat.No.	Size
29836.02	100 g
29836.03	500 g
29836.04	1 kg

MP 310 Power Supply

HS 90272000

The Major Science MP 310 power supply is a microprocessor-controlled power supply with full control range of designated current and/or voltage. Its maximum voltage output is 300 V. MP 310 is designed to meet most electrophoresis needs in a personal, single, easy to use unit. It is capable of running horizontal and vertical electrophoresis (like 2D electrophoresis, SDS PAGE applications). In addition, a timer with alarm function is also equipped in the unit, and so is pause function. Furthermore, the powerful specifications plus four terminator pairs can be used to run four units in parallel. The compact design of stackability is another feature to save benchtop space.

- Advanced power capacity: 300 V, 700 mA, 150 W
- Wide applications for DNA, RNA, and protein electrophoresis
- Microprocessor controlled
- Constant voltage or constant current
- Four pairs of outlet terminator
- Timer with alarm function
- Advanced safety devices
- Stackability
- Compact size

Cat.No.	Size
MP-310	1 piece

MP 320 Power Supply

HS 90272000

In addition to running standard horizontal agarose and vertical polyacrylamide gels, the MP 320 power supply easily handles all your blotting applications. Its microprocessor control offers constant voltage, constant current or constant power and pause/resume run capability during timed or continuous operation. MP 320 is fully programmable, offering up to 6 multi-step settings and saving up to 30 programs, and capable of running 4 cells simultaneously. Its design provides a compact and modern stackable case, and a 2.6" LCD screen, which displays all the running / setting conditions. Safety devices include no load detection, leakage detection, sudden load change, over temperature protection, and over load detection.

- 300 V maximum voltage
- 3000 mA maximum current
- 300 W maximum power
- Four pairs of outlet terminals
- Timer with alarm function
- Constant voltage or constant current operation
- Advanced safety device design
- Compact size
- Stackable case
- Wide applications for DNA, RNA and protein electrophoresis

Cat.No.	Size
MP-320	1 piece

MP 510 Power Supply

HS 90272000

The MP 510 power supply is a microprocessor controlled power supply that covers the broadest range of applications. It offers constant voltage, constant current or constant power. Pause/resume run capability during timed or continuous operation is allowed. MP 510 is a fully programmable model, offering up to 6 multi-step settings and saving up to 30 programs, and capable for running 4 electrophoresis systems simultaneously. Its design provides a compact and modern stackable case, and a 2.6" LCD screen, showing all the running / setting conditions. Safety devices include no load detection, leakage detection, sudden load change detection, over temperature protection, and over load detection.

- 500 V maximum voltage
- 800 mA maximum current
- 300 W maximum power
- Four pairs of outlet terminals
- Timer with alarm function
- Advanced safety device design
- Compact size
- Stackable case
- Wide applications for DNA, RNA and protein electrophoresis

Cat.No.	Size
MP-510	1 piece

MS 222

see 12396 3-Aminobenzoic acid ethyl ester·methanesulfonate, page 10

MS White Light Table A4

HS 90278017

White light table with filter size of 210 x 297 mm. Suitable for digital image analysis and other daily routine work.

Cat.No.	Size
DI-WLA4	1 piece

MTT

see 20395 3-(4,5-Dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium ·bromide, page 39

Murashige and Skoog Minimal Organic Powder Medium

DANGER
H271 ♦ GGVSE/ADR 5.1 III UN1479 ♦ IATA 5.1 III UN1479 ♦ HS 38210000
Storage temperature +2 °C to +8 °C

Murashige and Skoog Plant Salts **with** i-inositol and thiamine hydrochloride. **Without** agar and **without** sucrose.

Supplements:

Agar (cat. no. 11396)	8 g/l
Sucrose (cat. no. 35579)	30 g/l

References:
1. Murashige, T. & Skoog, F. (1962) Physiol. Plant. ***15,*** 473-97

Cat.No.	Size
47515.04	10 L
47515.03	5 x 10 L

Murashige and Skoog Plant Salts

DANGER
H271 ♦ GGVSE/ADR 5.1 III UN1479 ♦ IATA 5.1 III UN1479 ♦ HS 38210000

Murashige and Skoog Plant Salts without i-inositol and thiamine hydrochloride. Without agar and without sucrose.

References:
1. Murashige, T. & Skoog, F. (1962) Physiol. Plant. ***15,*** 473-97

Cat.No.	Size
47516.03	50 L

MycoDecon

DANGER
H225-H318-H336 ♦ GGVSE/ADR 3 II UN1987 ♦ IATA 3 II UN1987 ♦ HS 38089490

Highly effective disinfectant, particularly active against mycoplasma, but also against bacteria, virus and fungus.
One of the sources of mycoplasma contamination is the formation of aerosols that can occur during handling of infected cells. Cell culture labs should therefore thoroughly disinfect all surfaces of the laboratories and equipment, including benches, incubators, storage boxes of cells, liquid nitrogen containers.
MycoDecon is an alcohol based, non-corrosive and non-carcinogenic solution which can be easily sprayed on all surfaces without leaving any traces.
Supplied in a spray bottle (250 ml) or as refill (500 ml).

Cat.No.	Size
34206.01	250 ml
34206.02	500 ml

Mycorase Solution (50x) for mycoplasma removal

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

Mycorase is a highly effective antibiotic solution especially developed for safe eradication of mycoplasma contamination in most cell lines. It is active against a broad range of different mycoplasma strains without effect on eukaryotic cell proliferation.

- Ready-to-use solution
- Broad range of action
- Safe eradication without effect on cell proliferation
- Permanent cure for most cell types

Cat.No.	Size
47987.01	100 ml

Mycostatin

see 29870 Nystatin min. 4 400 units/mg, page 85

Myoglobin equine lyophil.

M_r ca. 17 800 ♦ CAS [100684-32-0]

EINECS 309-705-0 ♦ WGK 1 ♦ HS 35040090
Storage temperature +2 °C to +8 °C

From skeletal muscle; consisting mainly of metmyoglobin (Fe^{3+} -form).

Assay (SDS PAGE)	min. 95.0 %
pI	7.3
Iron content	ca. 0.3 %

References:
1. Takano, T. (1977) J. Mol. Biol. ***171,*** 31-59

Cat.No.	Size
29895.01	100 mg

NAD

see 30311 β-Nicotinamide adenine dinucleotide, page 83

NADH

see 30312 β-Nicotinamide adenine dinucleotide reduced·Na_2-salt, page 83

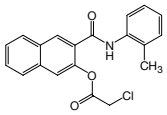
Nadic methyl anhydride

see 29452 Methylnadic anhydride, page 78

NADPH

see 30316 β-Nicotinamide adenine dinucleotide phosphate reduced ·Na_4-salt, page 83

Naphthol-AS-D-chloroacetate pure



$C_{20}H_{16}NO_3Cl$ ♦ M_r 353.8 ♦ CAS [35245-26-2]

EINECS 252-463-5 ♦ HS 29241900
Storage temperature -15 °C to -25 °C

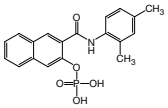
Histochemical substrate for esterase with improved stability.

Assay (HPLC) min. 97.0 %

References:
1. Burstone, M.S. (1957) Arch. Panthol. ***63,*** 164-7
2. Moloney, W. et al. (1960) J. Histochem. Cytochem. ***8,*** 200-7

Cat.No.	Size
29995.01	250 mg
29995.02	1 g

Naphthol-AS-MX-phosphate research grade



$C_{19}H_{18}NO_5P$ ♦ M_r 371.32 ♦ CAS [1596-56-1]

H315-H319-H335 ♦ EINECS 216-480-1 ♦
HS 29241900
Storage temperature -15 °C to -25 °C

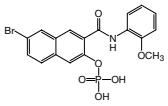
Selective substrate of alkaline phosphatase. Suitable for dye coupling. Fast Blue RR (1). Fast Red TR-salt (cat. no. 21317) (2).

Assay (HPLC) min. 99.0 %

References:
1. Makler, M.T. et al. (1981) Clin. Chem. ***27,*** 1609-13
2. Avrameas, S. (1976) Methods Enzymol. ***44,*** 709-17

Cat.No.	Size
30002.01	250 mg

Naphthol-AS-BI-phosphate research grade



(6-Bromo-2-phosphohydroxy-3-naphthoic acid o-anisidide)

$C_{18}H_{15}BrNO_6P$ ♦ M_r 452.2 ♦ CAS [1919-91-1]

WARNING
H315-H319-H335 ♦ EINECS 217-645-0 ♦
WGK 1 ♦ HS 29322985
Storage temperature -15 °C to -25 °C

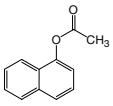
Histochemical substrate for phosphatase.

Purity (HPLC) min. 95.0 %

References:
1. Pearse, A.C.E. (1960) Histochemistry, Theoretical and Applied, 2nd ed., p. 914, Little, Brown & Co., Boston

Cat.No.	Size
29988.02	500 mg
29988.03	1 g

1-Naphthyl acetate analytical grade



(α-Naphthyl acetate; Acetic acid α-naphthyl ester)
$C_{12}H_{10}O_2$ ♦ M_r 1 186.21 ♦ CAS [830-81-9]

EINECS 212-599-8 ♦ HS 29153900
Storage temperature +2 °C to +8 °C

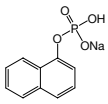
Substrate for esterases.

Assay (HPLC) min. 99.0 %
MP 42 - 46 °C

References:
1. Mastropaolo, W. & Yourno, J. (1981) Anal. Biochem. ***115,*** 188-93

Cat.No.	Size
30040.01	25 g

1-Naphthyl phosphate·Na-salt analytical grade



(Sodium-1-naphthyl hydrogen phosphate)
$C_{10}H_8O_4P{\cdot}Na{\cdot}H_2O$ ♦ M_r 264.15 ♦ CAS [81012-89-7]

WARNING
H315-H319-H335 ♦ EINECS 220-171-7 ♦
HS 29199000
Storage temperature +2 °C to +8 °C

Specially purified product for assay of phosphatase activity.

Assay (titr.) min. 98.0 %
Free naphthol max. 0.01 %

References:
1. Pearse, A.C.E. (1960) Histochemistry, Theoretical and Applied, 2nd ed., p. 882, Little, Brown & Co., Boston

Cat.No.	Size
30130.03	5 g

Native Anode Buffer for BN/CN (10x)

HS 38220000

Running buffer for the use as anode buffer in Blue or Clear Native PAGE. Supplied as 10x concentrate. Contains 500 mM BisTris-HCl (pH 7.0).

Cat.No.	Size	EUR
42535.01	1 L	91,00

Native Cathode Buffer for BN/CN (10x)

HS 38220000

Running buffer for the use as cathode buffer in Blue or Clear Native PAGE. Supplied as 10x concentrate. Contains 500 mM Tricine, 150 mM BisTris.

Cat.No.	Size
42536.01	500 ml

NBT

see 30550 Nitro blue tetrazolium chloride, page 84

NC 2 Nitrocellulose Membrane

Pore size 0.2 m, format: 30 cm x 3 m

CAS [9004-70-0]

WARNING
H228 ♦ GGVSE/ADR 4.1 II UN3270 ♦ IATA 4.1 II UN3270 ♦ WGK 1 ♦
HS 39122019

Especially for use with proteins of low molecular weight (< 20 000 Dalton). Nitrocellulose membranes are the most popular membranes for Western, Southern and Northern Blotting. The membranes bind both proteins and nucleic acids. Nitrocellulose exhibits high binding capacity and has low background.

References:
1. Burnette, N. (1981) Anal. Biochem. ***112***, 195-203
2. Tsang, V.C.W. et al. (1983) Methods Enzymol. ***92***, 377

Cat.No.	Size
71224.01	1 roll

NC 2 Nitrocellulose Membrane

Pore size 0.2 µm, format: 80 mm x 85 mm

CAS [9004-70-0]

WARNING
H228 ♦ GGVSE/ADR 4.1 II UN3270 ♦ IATA 4.1 II UN3270 ♦ WGK 1 ♦
HS 39122019

Especially for use with proteins of low molecular weight (< 20 000 Dalton). Nitrocellulose membranes are the most popular membranes for Western, Southern and Northern Blotting. The membranes bind both proteins and nucleic acids. Nitrocellulose exhibits high binding capacity and has low background.

References:
1. Burnette, N. (1981) Anal. Biochem. ***112***, 195-203
2. Tsang, V.C.W. et al. (1983) Methods Enzymol. ***92***, 377

Cat.No.	Size
71222.01	10 pieces

NC 2 Nitrocellulose Membrane
Pore size 0.2 µm, format: 20 cm x 20 cm

CAS [9004-70-0]

WARNING
H228 ♦ GGVSE/ADR 4.1 II UN3270 ♦ IATA 4.1 II UN3270 ♦ WGK 1 ♦ HS 39122019

Especially for use with proteins of low molecular weight (< 20 000 Dalton). Nitrocellulose membranes are the most popular membranes for Western, Southern and Northern Blotting. The membranes bind both proteins and nucleic acids. Nitrocellulose exhibits high binding capacity and has low background.

References:
1. Burnette, N. (1981) Anal. Biochem. ***112***, 195-203
2. Tsang, V.C.W. et al. (1983) Methods Enzymol. ***92***, 377

Cat.No.	Size
71223.01	5 sheets

NC 45 Nitrocellulose Membrane
Pore size 0.45 µm, format: 30 cm x 3 m

CAS [9004-70-0]

WARNING
H228 ♦ GGVSE/ADR 4.1 II UN3270 ♦ IATA 4.1 II UN3270 ♦ WGK 1 ♦ HS 39122019

Nitrocellulose membranes are the most popular membranes for Western, Southern and Northern Blotting. The membranes bind both proteins and nucleic acids. Nitrocellulose exhibits high binding capacity and has low background.

Cat.No.	Size
71208.01	1 roll

NC 45 Nitrocellulose Membrane
Pore size 0.45 µm, format: 88 mm x 88 mm

CAS [9004-70-0]

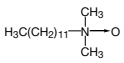
WARNING
H228 ♦ GGVSE/ADR 4.1 II UN3270 ♦ IATA 4.1 II UN3270 ♦ WGK 1 ♦ HS 39122019

Nitrocellulose membranes are the most popular membranes for Western, Southern and Northern Blotting. The membranes bind both proteins and nucleic acids. Nitrocellulose exhibits high binding capacity and has low background.

Cat.No.	Size
42516.01	10 sheets

NDSB-201 research grade

(Non-Detergent Sulfobetaine 201; PPS; 3-(1-Pyridino)-1-propane sulfonate; 1-(3-Sulfopropyl)pyridinium betain)
$C_8H_{11}NO_3S$ ♦ CAS [15471-17-7]



HS 29333999

A non-detergent sulfobetaine with zwitterionic properties. Easily removed by dialysis. Similar to zwitterionic detergent, but does not form micelles due to too short hydrophobic side chains. It prevents protein aggregation and facilitates the renaturation of chemically and thermally denatured proteins. Suitable for solubilization of proteins for proteomic applications.

Assay (titr.)	min. 98.0 %

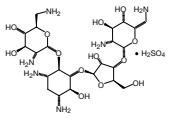
References:
1. Goldberg, M., E., et al., (1996), Folding & Design ***1***, 21
2. Vuillard, L., et al., (1995), Biochem. J. ***305***, 337

Cat.No.	Size
20762.02	250 g

NEM
see 11331 N-Ethylmaleimide, page 47

Neodol PB
see 35796 Teepol 610, page 147

Neomycin·sulfate research grade, Ph. Eur.



$C_{23}H_{46}N_6O_{13}·xH_2SO_4$ ♦ M_r 614.7 (base) ♦ CAS [1405-10-3]

DANGER

H315-H317-H319-H334-H335-H361d ♦
EINECS 215-773-1 ♦ WGK 1 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Min. 680 U/mg. Aminoglycoside antibiotic complex. Inhibits protein biosynthesis by binding to the 30S subunit of bacterial ribosomes. Causes misreading of mRNA.

References:
1. Cox, D. et al. (1977) in: Sammes, P.B. (ed.) Topics in antibiotics chemistry vol. ***I.*** Chichester: Horwood, pp. 1-90
2. Lancini, G. & Parenti, F. (1982) Antibiotics, Springer, New York

Cat.No.	Size
30250.01	10 g
30250.02	25 g
30250.03	100 g

NetFix™ for PAG Size: 265 mm x 125 mm

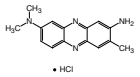
HS 38220000

NetFix™ is an inert, reinforcing fabric which serves as an ideal support for gel layers. The polyester fabric is activated to bind polyacrylamide.

NetFix is a registered trademark of SERVA.

Cat.No.	Size
42775.01	36 pieces

Neutral Red pure



(Basic Red 5; Toluylene Red; 3-Amino-7-dimethylamino-2-methylphenazinium·chloride)
C.I.50040 ♦ $C_{15}H_{17}N_4·Cl$ ♦ M_r 288.8 ♦ CAS [553-24-2]

EINECS 209-035-8 ♦ WGK 2L ♦ HS 32041300

Indicator pH 6.8 - 8.0. For use in histology and supravital staining.

λ max.	523 nm - 533 nm
A 1 cm/0.001 % in water	
528 nm	min. 0.5
ϵ528 nm/water	min. 14 440

Cat.No.	Size
30305.01	25 g

Ni-Extrachel Agarose Resin

HS 38220000
Storage temperature +2 °C to +8 °C

The resin has a polychelator ligand covalently coupled to a highly crosslinked agarose resin and is loaded with nickel ions.
Ni-Extrachel Agarose Resin works in presence of EDTA, DTT and other chemicals, which result in stripping of the metal ions with standard Ni-NTA or -IDA resins.
Its specificity and stability allows a one-step purification without the need of pretreatment of samples for removal of nickel stripping agents.
Suitable for batch, gravity and high pressure column purification.
Binding capacity: > 80 mg/ml gel.

Cat.No.	Size
42180.01	25 ml
42180.02	100 ml

Ni^{2+}-IDA-Metal Chelate Sepharose Resin

HS 38220000

Ni^{2+}-IDA Metal Chelate Agarose Resin designed for affinity purification of polyhistidine tagged proteins. Nickel ions are carefully loaded onto an agarose matrix via an iminodiacetic acid (IDA) coupled ligand to obtain a stable affinity matrix with a high binding capacity for histidine residues (up to 10 mg/ml determined from *E. coli* cleared lysate). Other metal ions such as Co^{2+}, Cu^{2+}, and Zn^{2+} can also be used resulting in different affinities.
If required, the nickel ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: Agarose
Couples ligand: Iminodiacetic acid (IDA)
Binding capacity: 10 mg/ml
Bead size: 45 – 160 µm
Flow rate: 0.25 – 2 ml/min
Maximum pressure: 42 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 12
Cleaning buffer examples: 30 % ethanol, 1 M NaOH, 0.01 M HCl, 8 M urea, 6 M guanidinium hydrochloride
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42316.01	100 ml

Ni^{2+}-IDA-Metal Chelate Sepharose Resin

HS 38220000

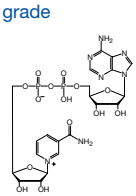
Ni^{2+}-IDA Metal Chelate Agarose Resin designed for affinity purification of polyhistidine tagged proteins. Nickel ions are carefully loaded onto an agarose matrix via an iminodiacetic acid (IDA) coupled ligand to obtain a stable affinity matrix with a high binding capacity for histidine residues (up to 10 mg/ml determined from *E. coli* cleared lysate). Other metal ions such as Co^{2+}, Cu^{2+}, and Zn^{2+} can also be used resulting in different affinities.
If required, the Nickel ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: Agarose
Couples ligand: Iminodiacetic acid (IDA)
Binding capacity: 10 mg/ml
Bead size: 45 – 160 µm
Flow rate: 0.25 – 2 ml/min
Maximum pressure: 42 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 12
Cleaning buffer examples: 30 % ethanol, 1 M NaOH, 0.01 M HCl, 8 M urea, 6 M guanidinium hydrochloride
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42315.01	25 ml

β-Nicotinamide adenine dinucleotide analytical grade

(NAD; DPN)
$C_{21}H_{27}N_7O_{14}P_2$ ♦ M_r 663.43 ♦ CAS [53-84-9]



EINECS 200-184-4 ♦ WGK 1 ♦ HS 29349990
Storage temperature +2 °C to +8 °C

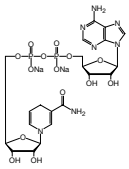
β-Nicotinamide adenine dinucleotide (NAD+) forms together with β-Nicotinamide adenine dinucleotide reduced (NADH) a coenzyme redox pair involved in a wide range of enzyme catalyzed oxidation reduction reactions.

Assay (enzym.)	min. 94.5 %
Assay from ϵNAD 260 nm, pH 7	min. 94.5 %
Water content (KF)	max. 3.5 %

Cat.No.	Size
30311.02	1 g
30311.03	5 g
30311.04	25 g

β-Nicotinamide adenine dinucleotide reduced·Na_2-salt research grade

(NADH; DPNH)
$C_{21}H_{27}N_7O_{14}P_2 \cdot Na_2$ ♦ M_r 709.4 ♦ CAS [606-68-8]



EINECS 210-123-3 ♦ WGK 1 ♦ HS 29349990
Storage temperature -15 °C to -25 °C ✻

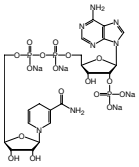
β-Nicotinamide adenine dinucleotide reduced (NADH) forms together with β-Nicotinamide adenine dinucleotide (NAD+) a coenzyme redox pair involved in a wide range of enzyme catalyzed oxidation reduction reactions.

Assay (HPLC)	min. 98.0 %
Loss on Drying	max. 8.0 %

Cat.No.	Size
30312.01	250 mg
30312.02	1 g

β-Nicotinamide adenine dinucleotide phosphate reduced ·Na_4-salt analytical grade

(NADPH; TPNH)
$C_{21}H_{26}N_7O_{17}P_3 \cdot Na_4$ ♦ M_r 833.4 ♦ CAS [2646-71-1]



EINECS 220-163-3 ♦ WGK 1 ♦ HS 29349990
Storage temperature -15 °C to -25 °C ✻

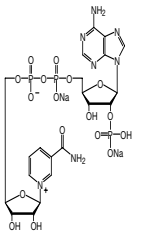
β-Nicotinamide adenine dinucleotide phosphate reduced (NADPH) forms together with β-Nicotinamide adenine dinucleotide phosphate (NADP+) a coenzyme redox pair involved in a wide range of enzyme catalyzed oxidation reduction reactions.

Assay (anhydrous) from ϵNADPH 260 nm (ϵ = 15 000)	min. 80.0 %
Assay of NADP·Na_4 (enzymatic, 340 nm)	min. 79.0 %
Assay (HPLC)	min. 95.0 %
Water (KF)	max. 6.0 %

Cat.No.	Size
30316.01	25 mg
30316.02	100 mg
30316.03	500 mg

β-Nicotinamide adenine dinucleotide phosphate·Na_2-salt research grade

(NADP; TPN)
$C_{21}H_{26}N_7O_{17}P_3 \cdot Na_2$ ♦ M_r 787.4 ♦ CAS [24292-60-2]



EINECS 246-129-8 ♦ WGK 1 ♦ HS 29349990
Storage temperature -15 °C to -25 °C

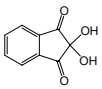
β-Nicotinamide adenine dinucleotide phosphate (NADP+) forms together with β-Nicotinamide adenine dinucleotide phosphate reduced (NADPH) a coenzyme redox pair involved in a wide range of enzyme catalyzed oxidation reduction reactions.

Assay (enzymatic)	min. 97.0 %
Water (KF)	max. 6.0 %

Cat.No.	Size
30315.02	100 mg
30315.04	1 g
30315.05	5 g

Ninhydrin analytical grade

(2,2-Dihydroxy-1,3-indanedione)
$C_9H_6O_4$ ♦ M_r 178.2 ♦ CAS [485-47-2]



WARNING
H302-H315-H319-H335 ♦ EINECS 207-618-1 ♦ WGK 2 ♦ HS 29144090

Reagent for the detection and assay of amino acids, peptides, amines and amino sugars.

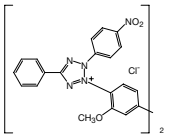
Assay (titr.)	min. 99.0 %

References:
1. Schönberg, A. & Singer, E. (1978) Tetrahedron ***34,*** 1285-1300

Cat.No.	Size
30410.01	25 g

Nitro blue tetrazolium chloride analytical grade

(NBT; Nitro BT; Nitrotetrazolium blue chloride; Ditetrazolium dye)



$C_{40}H_{30}Cl_2N_{10}O_6$ ♦ M_r 817.7 ♦ CAS [298-83-9]

WARNING
H302-H332 ♦ EINECS 206-067-4 ♦ WGK 1 ♦ HS 29339980
Storage temperature +2 °C to +8 °C

A ditetrazolium compound for demonstrating succinic dehydrogenase activity (1), glucose-6-phosphate dehydrogenase (2) and xanthine oxidase (3). Used in conjuction with BCIP (cat. no. 15247) for detection of alkaline phosphatase.
Stock solution: 50 mg/ml in 70 % DMF. Store at 4 °C or -20 °C.
Staining solution for Western Blots: 66 µl NBT stock solution and 33 µl BCIP stock solution in 10 ml staining buffer (100 mM NaCl, 5 mM $MgCl_2$, 100 mM Tris; pH 9.5)

Purity	min. 98.0 %

References:
1. Nachlas, M.M. et al. (1957) J. Histochem. Cytochem. ***5,*** 420-36
2. Negi, D.S. & Stephens, R.J. (1977) J. Histochem. Cytochem. ***25,*** 149-54
3. Auscher, C. & Amory, N. (1976) Biomedicine ***5,*** 37-8

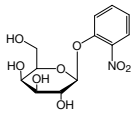
Cat.No.	Size
30550.01	250 mg
30550.02	1 g
30550.03	5 g

Nitro BT

see 30550 Nitro blue tetrazolium chloride, page 84

2-Nitrophenyl-β-D-galactopyranoside research grade

(ONPG)



$C_{12}H_{15}NO_8$ ♦ M_r 301.3 ♦ CAS [369-07-3]

EINECS 206-716-1 ♦ WGK 1 ♦ HS 29389090
Storage temperature +2 °C to +8 °C

Substrate for β-D-galactosidase.

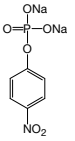
Purity (HPLC)	> 99.0 %
Free nitrophenol	max. 500 ppm

References:
1. Levvy, G.A. & Conchie, J. (1966) Methods Enzymol. ***8,*** 571-84
2. Naider, F. et al. (1972) Biochemistry ***11,*** 3202-7

Cat.No.	Size
30710.02	5 g

4-Nitrophenyl phosphate·Na_2-salt analytical grade

(4-NPP)



$C_6H_4NO_6P{\cdot}Na_2{\cdot}6H_2O$ ♦ M_r 371.1 ♦ CAS [4264-83-9]

EINECS 224-246-5 ♦ WGK 1 ♦ HS 29199000
Storage temperature -15 °C to -25 °C

Filled under nitrogen. High quality substrate for alkaline and acid phosphatase (1).

Assay (HPLC)	min. 99.0 %
Water (KF)	27 - 31 %
Free p-nitrophenol	max. 0.1 %

References:
1. Lowry, O.H. (1957) Methods Enzymol. ***4,*** 371-2
2. Bowers, G. et al. (1981) Clin. Chem. ***27,*** 135-43

Cat.No.	Size
30770.02	25 g
30770.03	100 g

NMA

see 29452 Methylnadic anhydride, page 78

Non-Detergent Sulfobetaine 201

see 20762 NDSB-201, page 82

Nonenylsuccinic anhydride pure

(NSA; ERL-4206 hardener)

$C_{13}H_{20}O_3$ ♦ M_r 224.3 ♦ CAS [28928-97-4]

WARNING
H315-H319-H335 ♦ EINECS 242-317-8 ♦ WGK 1 ♦ HS 29171980

Especially purified for electron microscopy. Hardener component for SPURR embedding.

Cat.No.	Size
30812.01	250 ml

Norit® A pract.

(Activated charcoal)
CAS [64365-11-3]

HS 38021000

Activated charcoal from peat. Acid washed.

Norit = registered trademark of Norit B.V.

Cat.No.	Size
30890.01	100 g
30890.02	1 kg

Novobiocin·Na-salt research grade

$C_{31}H_{35}N_2O_{11}{\cdot}Na$ ♦ M_r 634.6 ♦ CAS [1476-53-5]

WARNING
H317-H319 ♦ EINECS 216-023-6 ♦ WGK 1 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Coumarin-glycoside antibiotic. Inhibitor of bacterial DNA gyrase (1). Mechanism of action (2).
Antagonist of heat shock protein 90 (Hsp90) (3, 4, 5).

Assay (from N)	min. 95.0 %
[α] 24 °C/D (c=2.5 % in water)	-34.0 ° to -38.0 °
MP	210 - 220 °C

References:
1. Cozzarelli, N.R. (1980) Science ***207,*** 953-60
2. Staudenbauer, W.L. (1975) J. Mol. Biol. ***96,*** 201-5
3. Marcu, M.G. et al. (2000) J. Natl. Cancer Inst. ***92***, 242-8
4. Marcu, M.G. et al. (2000) J. Biol. Chem. ***275***, 37181-6
5. Sreedhar, A.S. et al. (2003) J. Biol. Chem. ***278***, 35231-40

Cat.No.	Size
30995.01	1 g

NSA

see 30812 Nonenylsuccinic anhydride, page 84

NTA-Agarose Resins

see 42139 SERVA Ni-NTA Agarose Resin, page 120

dNTP PCR Mix, solution 10 mM molecular biology grade

HS 38220000
Storage temperature -15 °C to -25 °C ✻✻

Ready to use dNTP mixture for the Tth DNA polymerase and Taq DNA polymerase.
Mixture of dATP, dCTP, dGTP, dTTP, 10 mM of each, free of DNase, RNase, Phosphatase and Protease. Absolutely free of substances that may inhibit PCR, e.g. pyrophosphates etc. Ultrapure dNTPs qualified for use in standard and long PCR, RT-PCR, manual and automated sequencing, cDNA synthesis, DNA footprinting and labelling reactions.
Every lot is tested in a 30 kb PCR and real-time PCR reaction.

Purity	> 98.0 %
pH	8.5 ±0.1

Cat.No.	Size
39712.01	0,2 ml
39712.02	5 x 0,2 ml

dNTPs Set, solution 100 mM molecular biology grade

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

Set of 100 mM solutions of each dATP, dCTP, dGTP, dTTP.
Free of DNase, RNase, Phosphatase and Protease. Absolutely free of substances that may inhibit PCR, e.g. pyrophosphates etc.
Ultrapure dNTPs qualified for use in standard and long PCR, RT-PCR, manual and automated sequencing, cDNA synthesis, DNA footprinting and labelling reactions. Every lot is tested in a 30 kb PCR and real-time PCR reaction.
0.25 ml correspond to 25 µmol.

Purity	> 99.0 %
pH	8.5 ±0.2

Cat.No.	Size
39705.01	4 x 250 µl
39705.02	4 x 1 ml

Nycodenz®, 60 % (w/v) solution in water

(NycoPrep® Universal)
$C_{19}H_{26}I_3N_3O_9$ ♦ M_r 821.1

HS 38220000
Storage temperature +2 °C to +8 °C

Non-ionic density gradient medium, similar to the former Metrizamide but less toxic. Mammalian cells and viruses isolated in Nycodenz® gradients potentially retain better functional integrity than in Metrizamide gradients. Nycodenz® is suitable for the isolation of a wide range of different cell types, viruses, subcellular organelles and other membrane compartments. Gradient preparation and resolution of cellular organelles are largely similar with both media. In contrast to Metrizamide, solutions of Nycodenz® can be sterilized by autoclaving.

Density (20 °C)	1.310 ± 0.002 g/ml
Osmolarity	580 ± 10 mOsm
Refractive index (20 °C)	1.4273 ± 0.0003

Nycodenz + Nycoprep = registered trademarks of Axis-Shield, Norway.

References:
1. Johne, R. & Muller, H. (2004) J. Virol. ***78***, 930-7
2. Whiteley, A.S. et al. (2003) J. Microbiol. Meth. ***54***, 257-67
3. Masuya, M et al. (2003) Blood ***101***, 2215-18
4. Schumacher, M.M. et al. (2002) J. Biol. Chem. ***277***, 51033-42
5. Jadot, M. et al. (2201) Eur. J. Biochemistry ***268***, 1392-99
6. Miller, K.E. & Sheetz, M.P. (2000) J. Biol. Chem. ***275***, 2598-2606
7. Wischmann, B. et al. (1999) Plant. Physiol. ***119***, 455-62

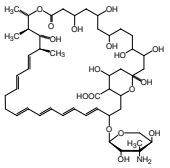
Cat.No.	Size
31000.01	50 ml

NycoPrep® Universal

see 31000 Nycodenz®, 60 % (w/v) solution in water, page 87

Nystatin min. 4 400 units/mg research grade, Ph. Eur.

(Fungicidin; Mycostatin)
$C_{47}H_{75}NO_{17}·2H_2O$ ♦ M_r 926.13 ♦ CAS [1400-61-9]



EINECS 215-749-0 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Polyene macrolide antibiotic isolated from *Streptomyces noursei*. Used in animal and plant cell cultures against fungi and yeasts. Forms complexes with ergosterol in the fungal cell membrane resulting in the formation of pores and loss of ions and small molecules.

References:
1. Chong, C.N. et al. (1970) Tetrahedron Lett. ***59,*** 5145-8
2. Coutinho, A. et al. (2004). Biophys. J. ***87***, 3264-76
3. Leifert, C. et al. (1991) J. Microbiol. Biotechnol. ***7***, 452-69
4. Constabel, F. & Shyluk, J.P. (1994): Plant Cell and Tissue Culture, eds. I.K. Vasil a. T.A. Thorpe; pp 3-15. Springer Netherlands
5. Banu, K.S. et al. (2001) Endocrine Pathol. ***12,*** 315-27
6. Wang, A. et al. (2005) Appl. Environ. Microbiol. ***71***, 8397-401
7. Funkenstein, B. et al. (2006) Tissue and Cell ***38***, 399-415

Cat.No.	Size
29870.01	1 g
29870.02	10 g

Octenidin Dihydrochloride analytical grade

$C_{36}H_{62}N_4·2HCL$ ♦ M_r 623.83 ♦ CAS [70775-75-6]

WARNING
H302-H315-H319-H332-H335 ♦ EINECS 274-861-8 ♦ WGK 3 ♦ HS 29333999

Cation-active chemical compound that binds to negatively charged bacterial cell envelope thereby disrupting the vital functions of the cell membrane. Broad spectrum bactericidal, fungicidal and virucidal against some lipophilic viruses (Herpes, Hepatitis B). Approved by European Medicines Agency as a broad antiseptic for disinfection of skin, mucous membranes and open wounds. Used as 0.1 – 2.0 % solution (often with phenoxyethanol and propanol). Alternative to other antiseptics like benzalkonium chloride, chlorhexidine and PVP-iodine.
Free of dimethylformamide and toluol due to a novel production process.

Purity (HPLC)	min. 99.5 %
Water (KF)	max. 2.0 %
Heavy metals (Pb, As, Cr)	max. 20 ppm

References:
1. Sedlock D. M. & Bailey D. M. (1985) Antimicrob. Agents Chemother., ***28(6)***, 786-790
2. M.R. Patters M. R. et al. (1986) J. Peridontal Res. ***21***, 154-162
3. Dettenkofer M. et al. (2002) Infection ***30***, 282-2285

Cat.No.	Size
33107.01	1 g
33107.02	5 g

ONPG

see 30710 2-Nitrophenyl-β-D-galactopyranoside, page 84

Oramix L30

see 27570 N-Lauroylsarcosine·Na-salt, page 71

Orthophosphoric-monoester phosphohydrolase (alkaline optimum)

see 32471 Alkaline Phosphatase from calf intestine ca. 3000 U/mg protein (ca. 60 U/µl), page 10

Osmic acid

see 31253 Osmium tetroxide, page 85

Osmium (VIII) oxide

see 31253 Osmium tetroxide, page 85

Osmium tetroxide for electron microscopy

(Osmium (VIII) oxide; Osmic acid)
OsO_4 ♦ M_r 254.2 ♦ CAS [20816-12-0]

DANGER
H300-H310-H314-H330 ♦ MAK/TRK 0.0002 ml/m³, 0.0021 mg/m³ ♦ EG-Index 076-001-00-5 ♦ GGVSE/ADR 6.1 I UN2471 ♦ IATA 6.1 I UN2471 ♦ EINECS 244-058-7 ♦ WGK 3 ♦ HS 28259085

Used as a post fix and stain of tissues in scanning and transmission electron microscopy.

Osmium tetroxide reacts with lipids in tissue by oxidation of unsaturated bonds of fatty acids, which adds density and contrast to biological samples. In normal tissues, presence of osmium results in intense black staining. In addition, it is used in electron microscopy for enhancing staining.

Assay	min. 99.9 %

Cat.No.	Size
31251.04	250 mg
31251.03	1 g

Osmium tetroxide 4 % solution for electron microscopy

(Osmic acid; Osmium (VIII) oxide)
OsO_4 ♦ M_r 254.2

DANGER
H302-H312-H315-H318-H332-H335 ♦ MAK/TRK 0.0002 ml/m³, 0.0021 mg/m³ ♦ WGK 3 ♦ HS 28259085

40 mg/ml in water.

Cat.No.	Size
31253.01	2 ml
31253.02	10 x 2 ml
31253.03	10 ml
31253.04	5 x 10 ml

Ovalbumin

see 11842 Albumin Egg, page 9

2-Oxetanone

see 33672 β-Propiolactone, page 93

10.32 Packing Connector

HS 38220000

Luer/Thread connector for packing FliQ columns.

Cat.No.	Size
42282.01	1 piece

Pancreatopeptidase E

see 20930 Elastase from porcine pancreas min. 200 U/mg, page 44

PaperPool

HS 90272000

Tray for soaking the electrode wicks in buffer (up to 80 ml) used for all flatbed gels.

Cat.No.	Size
HPE-A02	1 piece

Paraffin oil, low viscosity

see 39776 Mineral oil, page 78

Paraffin oil, low viscosity

see 14500 Bayol F, page 16

Parafilm™, 0.5 m x 15 m

HS 39209990

Roll: width 50 cm (20“), length 15 m (50 ft). Supplied in sturdy cardboard container.

Parafilm = registered trademark of American Can Co.

Cat.No.	Size
90300.01	1 roll
90300.02	6 rolls

Parafilm™, 0.1 m x 38 m

HS 39209990

Roll: width 10 cm (4“), length 38 m (125 ft). Supplied in dispenser box.

Parafilm = registered trademark of American Can Co.

Cat.No.	Size
90310.01	1 box
90310.02	6 boxes
90310.03	12 boxes

Paraformaldehyde pure

(Polyoxymethylene)
$(CH_2O)_n$ ♦ M_r $(30.0)_n$ ♦ CAS [30525-89-4]

WARNING
H228-H302-H315-H317-H319-H332-H335-H351 ♦ GGVSE/ADR 4.1 III UN2213 ♦ IATA 4.1 III UN2213
WGK 2L ♦ HS 2912600

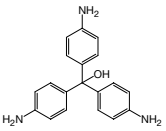
Paraformaldehyde is a cross-linking fixative used in histology, light and electron microscopy and flow cytometry. It is changed to formaldehyde by heating and by adding small amount of sodium hydroxide.
When the samples are to be used in fluorescence studies, paraformaldehyde is recommended as fixative. In histology it is generally preferred over other fixatives as the others result in more silver grains on the tissues.

Asssay (titr.)	min. 95.0 %

Cat.No.	Size
31628.01	100 g
31628.02	500 g

Parafuchsin research grade

(Basic Red 9; Magenta O; Pararosaniline)
C.I.42500 ♦ $C_{19}H_{18}N_3^+ \cdot Cl^-$ ♦ M_r 323.82 ♦ CAS [569-61-9]



DANGER
H350 ♦ Carc. 1B ♦ EG-Index 611-031-00-X ♦ EINECS 209-321-2 ♦ WGK 3L ♦ HS 32041300

Homogeneous in TLC (1). Indicator pH 1.0 - 3.1.
Suitable for aldehyde fuchsin staining and Schiff's reagent. For staining elastic fibres (2). For formaldehyde determination (3).

λ max. 0.003 %/l in EtOH:H_2O/1:1	543 - 549 nm
A 1 cm/λ max. 0.0003 % in EtOH:H_2O/1:1	min. 0.788
ε λ max. 0.0003 % in EtOH:H_2O / 1:1	min. 85 000
Water (KF)	max. 10.0 %

References:
1. Nettleton, G.S. & Martin A.W. (1973) Stain Technol. ***54,*** 213-6
2. Mowry, R.W. (1980) Stain Technol. ***55,*** 91-103
3. Georghiou, P.E. et al. (1983) Anal. Chem. ***55,*** 571-4

Cat.No.	Size
31627.01	5 g

Pararosaniline

see 31627 Parafuchsin, page 86

PBS Buffer (10x) sterile

(Phosphate buffered salt solution)
HS 38220000

10 x concentrated phosphate buffered salt solution, autoclaved.
PBS buffer is a widely used buffer in protein detection systems like Western Blot analysis, ELISAs and other enzyme assays, for immunocytological and immunohistological detection, *in situ* hybridization, apoptosis assays and staining of nuclei. 1x PBS is as well often used as protein solvent and diluent.

Composition:

NaCl (cat. no. 30183)	1.37 M
KCl (cat. no. 26868)	27 mM
Na_2HPO_4 (cat. no. 30200)	100 mM
KH_2PO_4 (cat. no. 26870)	20 mM
pH	7.2 - 7.6

Cat.No.	Size
42595.01	1 L

PBST Buffer (10x) sterile

(Phosphate buffered salt solution)
HS 38220000

10 x concentrated phosphate buffered salt solution with 0.5 % Tween 20, autoclaved.
PBST buffer is a widely used buffer in protein detection systems like Western Blot analysis, ELISAs and other enzyme assays, for immunocytological and immunohistological detection, in situ hybridization, apoptosis assays and staining of nuclei.

Composition:

NaCl (cat. no. 30183)	1.37 M
KCl (cat. no. 26868)	27 mM
Na_2HPO_4 (cat. no. 30200)	100 mM
KH_2PO_4 (cat. no. 26870)	20 mM
pH	7.2 - 7.6

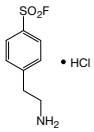
Cat.No.	Size
42597.01	1 L

PDT disulfonate

see 21326 Ferrozine®, page 48

PEFABLOC® SC

(4-(2-Aminoethyl)benzenesulfonylfluoride·HCl)
$C_8H_{10}NSO_2F·HCl$ ♦ M_r 239.7 ♦ CAS [30827-99-7]



DANGER
H314 ♦ GGVSE/ADR 8 II UN3261 ♦ IATA 8 II UN3261 ♦ HS 29214900
Storage temperature +2 °C to +8 °C

Protease inhibitor with major advantages over other inhibitors: Excellent stability at neutral pH. Ready solubility in aqueous buffers. Broad specificity for serine proteases. Minimum effect on cell growth.

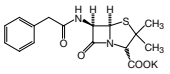
Purity (HPLC) min. 95.0 %

Pefabloc = registered Trademark of Pentapharm. Ltd.

Cat.No.	Size
31682.01	100 mg
31682.02	500 mg

Penicillin G·K-salt research grade, Ph. Eur.

(Benzylpenicillin potassium)
$C_{16}H_{17}N_2O_4S·K$ ♦ M_r 372.5 ♦ CAS [113-98-4]



WARNING
H317 ♦ EINECS 204-038-0 ♦ WGK 1 ♦ HS 29411000
Storage temperature +2 °C to +8 °C

β-Lactam antibiotic. Inhibitor of bacterial cell wall synthesis. Binds to the active site of a transpeptidase which is involved in the synthesis of murein, a major component of the bacterial cell wall. Frequently used in cell culture media to prevent the growth of contaminating bacteria (2), often in combination with streptomycin (3 - 5).

Assay (HPLC) min. 96.0 %

References:
1. Keller, N.P. et al. (2005) Nature Reviews Microbiology ***3***, 937-47
2. Wang, Z. et al. (2000) Anal. Chem. ***72***, 2001-7
3. Haraguchi, N. et al. (2006) Stem Cells ***24***, 506-13
4. Souza, G.R. Et al. (2006) PNAS ***103***, 1215-20
5. Pedersen, I.M. Et al. (2007) Nature ***449***, 919-22

Cat.No.	Size
31749.04	25 g
31749.03	100 g

Pepsin porcine ca. 15 milliAnson units/mg 2xcryst. lyophil.

(Pepsin A)
EC 3.4.23.1 ♦ M_r ca. 36 000 ♦ CAS [9001-75-6]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-008-00-6 ♦ EINECS 232-629-3 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

For the degradation of proteins. Pepsin preferentially hydrolyzes those peptide linkages which involve the amino group contributed by the aromatic amino acids phenylalanine, tyrosine and tryptophan.

Unit definition: 1 milliAnson unit is equivalent to 1 µmole of Folin-positive amino acids calculated as tyrosine, released from denatured hemoglobin per minute at 37 °C, pH 2.0.

Activity in other units: ca. 0.015 PU^{Hb}/mg („Pepsin-Unit" according to Anson (1, 2). Expressed in millimole tyrosine, therefore 1 PU^{Hb} = 1000 milliAnson units.)

References:
1. Anson, M.L. (1938) J. Gen. Physiol. ***22,*** 79-98
2. Ryle, A.P. (1984) Methods of Enzymatic Analysis, (Bergmeyer, H.U. ed.) 3rd Ed. vol. ***5,*** 223-38
3. Northrop, J.H. et al. (1948) Crystalline Enzymes 2nd ed., Columbia University Press, 305-8

Cat.No.	Size
31820.01	1 g
31820.02	5 g

Pepstatin A

(Isovaleryl-L-valyl-L-valyl-4-amino-3-hydroxy-6-methylheptanoyl-L- alanyl-4-amino-3-hydroxy-6-methylheptanoic acid; X-Val-Val-statyl-Ala-statin)
$C_{34}H_{63}N_5O_9$ ♦ M_r 685.9 ♦ CAS [26305-03-3]

EINECS 247-600-0 ♦ HS 29241900
Storage temperature +2 °C to +8 °C

Inhibitor of aspartic proteases, e.g. pepsin, renin, cathepsin D (1 - 3) and of retroviral proteases (4 - 7).

Assay (HPLC) min. 98.0 %

References:
1. Umezawa, H. (1976) Meth. Enzymol. ***45,*** 689-93
2. McCaffrey, G. & Jamieson, J.C. (1993) Comp. Biochem. Physiol. ***104,*** 91-4
3. Bailly, E. et al. (1991) Exp. Parasitol. ***72,*** 278-84
4. Baum, E.Z. et al. (1990) Proc. Natl. Acad. Sci. USA ***87,*** 10023-7
5. Grinde, B. et al. (1989) AIDS Res. Hum. Retroviruses ***5,*** 269-74
6. von der Helm, K. et al. (1989) FEBS Lett. ***247,*** 349-52
7. Katoh, I. et al. (1987) Nature ***329,*** 654-6

Cat.No.	Size
52682.02	5 mg
52682.03	25 mg

Peptone from casein enzymatic

HS 35040090

High quality source of peptides and amino acids produced by enzymatic digestion of casein. Refined hydrolysate that has been specially processed to increase solubility. Suitable as nutrient for laboratory media and industrial fermentation.

Total nitrogen (TN)	min. 10.0 %
Amino nitrogen (AN)	min. 3.9 %
pH (2 % solution)	6.5 - 7.5

Cat.No.	Size
48600.04	250 g
48600.02	1 kg

Peptone PLUS from casein enzymatic

HS 35040090

Manufactured by controlled enzymatic hydrolysis of casein. Contains a mix of peptides, free amino acids and growth factors. Peptide average molecular weight: ca. 500 Dalton. For analytical microbiology and industrial fermentation.

Total nitrogen	12.5 - 13.5 %
Amino nitrogen	3.0 - 4.0 %
AN/TN x 100	22 - 33
Solubility (5 % in water)	complete
pH (5 % solution)	6.5 - 7.5

Cat.No.	Size
48605.02	1 kg

Peptone from lactalbumin pancreatic

(Edamin S)
HS 35040090

Readily soluble pancreatic digest of lactalbumin recommended for production of Lactobacilli and other fermentations.

Total nitrogen	10.0 %
Amino nitrogen	4.8 %
Solubility (6 % in water)	complete
pH (6 % in water)	6.7 - 7.7

Cat.No.	Size
48625.03	5 kg

Peptone from meat pancreatic, Ph. Eur.

HS 35040090

Certificate of Suitability. Produced by controlled enzymatic hydrolysis of animal tissues. Contains a mix of peptides, free amino acids and growth factors. Peptide average molecular weight: ca. 1000 Dalton. Recommended as source of organic nitrogen in media for analytical microbiology and industrial fermentation.

Total nitrogen	15.0 - 16.0 %
Amino nitrogen	3.0 - 4.0 %
AN/TN x 100	18 - 26
Solubility (5 % in water)	complete
pH (5 % solution)	5.0 - 6.0

Cat.No.	Size
48619.02	1 kg

Peroxidase from horseradish min. 1000 U/mg lyophil.

(POD; HRP; Donor: hydrogen-peroxide oxidoreductase)
EC 1.11.1.7 ♦ M_r ca. 40 000 ♦ CAS [9003-99-0]

DANGER
H334 ♦ EINECS 232-668-6 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

For the determination of peroxide (1). Used as an indicator enzyme in reactions where peroxide is produced (2). For labelling antibodies in ELISA (3, 4). RZ (= A 403/A 275) = 3.0.

Unit definition: 1 U catalyzes the decomposition of 1 µmole hydrogen peroxide per minute at 25 °C, pH 7.0; reaction coupled with phenol-aminoantipyrine (5).

Activity in other units: min. 250 purpurogallin units/mg
(1 purpurogallin unit catalyzes the oxidation of 1 mg pyrogallol to purpurogallin in 20 seconds at 20 °C and pH 6.0. The purpurogallin is extracted and determined spectrophotometrically at 420 nm (6). 1 mg purpurogallin requires 13.5 µmole peroxide, 1 purpurogallin unit corresponds to the decomposition of 12 µmoles peroxide at 25 °C.)

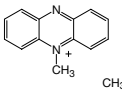
References:

1. Meiattini, F. (1985) Methods of Enzymatic Analysis, (Bergmeyer, H.U., ed.) 3rd Ed. vol. ***7***, p. 566-71
2. Bergmeyer, H.U. (1983) Methods of Enzymatic Analysis, 3rd Ed. vol. ***2***, p. 267-8
3. Johnson Jr., R.B. (1980) J. Immunoassay ***1,*** 27-37
4. Harlow & Lane (1988) Antibodies, Cold Spring Harbor Laboratory Press, p. 349
5. Gallati, H. (1977) J. Clin. Chem. Clin. Biochem. ***15,*** 699-703
6. Polis, B.D. & Shmukler, H.W. (1963) J. Biol. Chem. ***201,*** 457-500

Cat.No.	Size
31941.02	10 mg
31941.03	100 mg

Phenazine·methosulfate pure

(PMS; N-Methylphenazinium methylsulfate)
$C_{13}H_{11}N_2{\cdot}CH_3SO_4$ ♦ M_r 306.34 ♦ CAS [299-11-6]



WARNING
H315-H319-H335 ♦ EINECS 206-072-1 ♦ WGK 1 ♦ HS 29339980
Storage temperature +2 °C to +8 °C

Electron coupler, transfers electrons from NADH to tetrazolium salts, e.g. MTT, and thus makes NAD reductions visible.

Assay (Titr.) min. 98.0 %

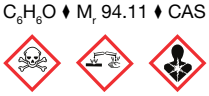
References:

1. Faber, E. et al. (1958) J. Histochem. Cytochem. ***6,*** 389
2. Altman, F.P. Biochem. J. ***125,*** 21P-22P

Cat.No.	Size
32030.01	1 g
32030.02	10 g

Phenol analytical grade, Ph. Eur., USP

(Hydroxybenzene)
C_6H_6O ♦ M_r 94.11 ♦ CAS [108-95-2]



DANGER
H301-H311-H314-H331-H341-H373 ♦ Muta. 2 ♦ MAK/TRK 7.8 mg/m³; 2 ml/m³ ♦ EG-Index 604-001-00-2 ♦ GGVSE/ADR 6.1 II UN1671 ♦ IATA 6.1 II UN1671 ♦ EINECS 203-632-7 ♦ WGK 2L ♦ HS 29071100

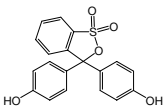
For separation of proteins during purification of nucleic acids.

Assay (titr.) 99.0 - 100.5 %

Cat.No.	Size
32046.02	500 g

Phenol Red research grade

(Phenylsulfonphthalein)
$C_{19}H_{14}O_5S$ ♦ M_r 354.4 ♦ CAS [143-74-8]



EINECS 205-609-7 ♦ WGK 2L ♦ HS 29349990

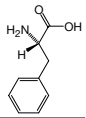
Indicator pH 6.5 - 8.0. Tested for use in tissue culture.

λmax. 0.0001 % in 0.01 M NaOH 558 - 562 nm

Cat.No.	Size
32095.01	5 g

L-Phenylalanine research grade, Ph. Eur.

(Phe; L-2-Amino-3-phenylpropionic acid)
$C_9H_{11}NO_2$ ♦ M_r 165.19 ♦ CAS [63-91-2]



EINECS 200-568-1 ♦ WGK 1L ♦ HS 29224985

Assay (titr.) 98.5 - 101.0 %

Cat.No.	Size
32191.02	100 g

Phenylmethylsulfonyl fluoride research grade

(PMSF; Benzylsulfonyl fluorid; α-Toluenesulfonyl fluoride)
$C_7H_7FO_2S$ ♦ M_r 174.19 ♦ CAS [329-98-6]

DANGER
H301-H314 ♦ GGVSE/ADR 8 II UN2923 ♦ IATA 8 II UN2923 ♦ EINECS 206-350-2 ♦ WGK 1 ♦ HS 29049095

Inhibits trypsin and chymotrypsin (1). Non-inhibitory to cholineesterase. Less toxic than diisopropylfluorophosphate (2). Inactivation of PMSF in buffer (3).

Assay (GC) min. 99.0 %
MP 90 - 94 °C

References:

1. Prouty, W.F. & Goldberg, A.L. (1972) J. Biol. Chem. ***247,*** 3341-52
2. Fahrney, D.E. & Gold, A.M. (1963) J. Am. Chem. Soc. ***85,*** 997-1009
3. James, G.T. (1978) Anal. Biochem. ***86,*** 574-9

Cat.No.
32395.02
32395.03
32395.04

Phosphatase-Inhibitor-Mix I, powder

DANGER
H302-H314-H361 ♦ WGK 1 ♦ HS 38220000

Mixture of 5 water-soluble inhibitors against acid and alkaline phosphatases, protein phosphatases 2A, 2B and 2C, phosphoprotein phosphatase, and protein-tyrosine phosphatase. Contains imidazole, sodium fluoride, sodium molybdate, sodium-ortho-vanadate, and sodium tartrate.
The content of 1 vial dissolved in 1 ml water will give a 100-fold concentrate suitable for the treatment of 100 ml tissue extract.

Cat.No.	Size
39050.01	1 vial
39050.02	5 vials
39050.03	10 vials

Phosphatase-Inhibitor-Mix II, solution

HS 38220000
Storage temperature +2 °C to +8 °C

Mixture of 7 different inhibitors dissolved in water, suitable for the inhibition of acid and alkaline phosphatases, protein phosphatases 2A, 2B and 2C, phosphoprotein phosphatase, protein-tyrosine phosphatase, and serine/threonine phosphatase.
Contains EDTA, ß-glycerophosphate-disodium salt, imidazole, sodium fluoride, sodium molybdate, sodium-ortho-vanadate, and sodium tartrate.
1 ml solution is suitable for the treatment of 100 ml tissue extract.

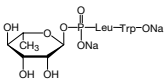
Cat.No.	Size
39055.01	1 vial
39055.02	5 vials
39055.03	10 vials

Phosphate buffered salt solution

see 42595 PBS Buffer (10x), page 86

Phosphoramidon research grade

(N-(α-Rhamnopyranosyloxyhydroxyphosphinyl)-L-Leu-L-Trp·Na· $2H_2O$)
$C_{23}H_{32}N_3O_{10}P{\cdot}Na_2$ ♦ M_r 587.5 ♦ CAS [119942-99-3]



HS 29419000
Storage temperature +2 °C to +8 °C

Inhibitor for thermolysin and neutral endopeptidase-24.11 (ANP Degradation Enzyme). Inhibits the activity of ‚Endothelin Converting Enzyme' (3 - 9).
Microbial product.
Store dry and protect from light!

Assay (HPLC)	min. 90.0 %

References:
1. Suda, H. et al. (1973) J. Antibiotics ***26,*** 621
2. Roques, B.P. & Beaumont, A. (1990) Trends Pharmacol. Sci. ***2,*** 245-9
3. Gettins, P. (1988) J. Biol. Chem. ***263,*** 10208-11
4. Ikegawa, R. et al. (1990) Biochem. Biophys. Res. Commun. ***171,*** 669-75
5. Rae, G.A. et al. (1993) Eur. J. Pharmacol. ***240,*** 113-9
6. Patel, K.V. & Schrey, M.P. (1995) Br. J. Cancer ***71,*** 442-7
7. Fawzi, A.B. et al. (1994) Anal. Biochem. ***222,*** 342-50
8. Umekawa, T. et al. (1994) J. Pharmacol. Exp. Ther. ***269,*** 860-6
9. Ohnaka, K. et al. (1993) J. Biol. Chem. ***268,*** 26759-66

Cat.No.	Size
32753.01	5 mg

o-Phthalaldehyde analytical grade

(o-Phthaldialdehyde)
$C_8H_6O_2$ ♦ M_r 134.14 ♦ CAS [643-79-8]

DANGER
H301-H314-H317-H400 ♦ GGVSE/
ADR 8 II UN2923 ♦ IATA 8 II UN2923 ♦
EINECS 211-402-2 ♦ WGK 3 ♦ HS 29122900
Storage temperature +2 °C to +8 °C

Especially purified for fluorimetric histidine determination (1). Reagent for amines and alkaloids (2) as well for amino acids (3, 4) and peptides (5, 6).

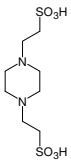
Assay (GC)	min. 99.0 %
MP	54 - 57 °C

References:
1. Gerber, D.A. (1970) Anal. Biochem. ***34,*** 500-4
2. Wachsmuth, H. et al. (1960) Z. Anal. Chem. ***176,*** 77
3. Roth, M. & Hampai, A. (1973) J. Chromatogr. ***83,*** 353-56
4. Benson, J.R. & Hare, P.E. (1975) Proc. Natl. Acad. Sci. USA ***72,*** 619-22
5. Mendez, E. & Gavilanes, J.G. (1976) Anal. Biochem. ***72,*** 473-79
6. Svedas, V.K. et al. (1980) Anal. Biochem. ***101,*** 188-95

Cat.No.	Size
32800.01	5 g
32800.02	25 g
32800.03	100 g

Piperazine-N,N'-bis(2-ethane sulfonic acid) analytical grade

(PIPES; 1,4-Piperazinediethane sulfonic acid)
$C_8H_{18}N_2O_6S_2$ ♦ M_r 302.4 ♦ CAS [5625-37-6]



HS 29335995

pKa 20 = 6.8.
Buffering substance for biochemistry and molecular biology.
Important buffer component in Northern Blot hybridisation buffers.

Assay (titr.)	min. 99.0 %
A 1 cm/2 % in NaOH	
250 nm	max. 0.2
Heavy metals (Pb)	max. 0.0005 %

References:
1. Good, N.E. et al. (1966) Biochemistry ***5,*** 467-77

Cat.No.	Size
32981.01	50 g
32981.02	250 g

PIPES

see 32981 Piperazine-N,N'-bis(2-ethane sulfonic acid), page 89

PMSF

see 32395 Phenylmethylsulfonyl fluoride, page 88

PNGase F, recombinant solution

M_r 36 000

HS 35079090
Storage temperature -15 °C to -25 °C

Concentration: 1000 u/µl (2.0 mg/ml), supplied in 1x PBS
PNGase F is a mutant recombinant glycosidase from *Flavobacterium meningosepticum* and expressed and purified from *E. coli*. The enzyme catalyzes the cleavage of N-linked oligosaccharides between the innermost GlcNAc and asparagine residues of high mannose, hybrid and complex oligosaccharides from N-linked glycoproteins.
The proprietary changes made to PNGase F have been shown to have unique characteristics when compared to other commercially-available sources of PNGase F:

- Does not need a denaturing step
- Works on native glycoproteins and serum glycoproteins in only minutes at room temperature
- Leads to a more complete glycan release compared to other commercially-available enzymes
- Especially designed and tested for mass spectrometry imaging of tissue samples

Unit definition: Achieves complete deglycosylation of 10 µg of RNase B incubated in 1x PBS with 1 µl of PNGase F for 5 - 10 min at 37 °C or room temperature.

Cat.No.	Size
36404.01	50 µl

PNGase F, recombinant lyophilized

M_r 36 000

HS 35079090

Concentration after reconstitution: 1000 u/µl (2.0 mg/ml) in 50 µl H_2O dest.
PNGase F is a mutant recombinant glycosidase from *Flavobacterium meningosepticum* and expressed and purified from *E. coli*. The enzyme catalyzes the cleavage of N-linked oligosaccharides between the innermost GlcNAc and asparagine residues of high mannose, hybrid and complex oligosaccharides from N-linked glycoproteins.
The proprietary changes made to PNGase F have been shown to have unique characteristics when compared to other commercially-available sources of PNGase F:

- No need for refrigerated transport, storage at room temperature
- Does not need a denaturing step
- Works on native glycoproteins and serum glycoproteins in only minutes at room temperature
- Digestion leads to a more complete glycan release as compared to other commercially-available enzymes
- Especially designed and tested for mass spectrometry imaging of tissue samples

Unit definition: Achieves complete deglycosylation of 10 µg of RNase B incubated in 1x PBS with 1 µl of PNGase F for 5 - 10 min at 37 °C or room temperature.

Cat.No.	Size
36405.01	100 µg

Poly-L-lysine 70 000·HBr research grade

$(C_6H_{14}N_2O_2{\cdot}HBr)_n$ ♦ M_r ca. 70 000 - 150 000 ♦ CAS [25988-63-0]

WGK 1 ♦ HS 35040090
Storage temperature -15 °C to -25 °C

Poly-L-lysine is a positively charged amino acid polymer with approximately one HBr per lysine residue, which makes it soluble in water.
The substance is a nonspecific attachment factor for cells. It promotes cell adhesion to solid substrates by enhancing electrostatic interaction between negatively charged ions of the cell membrane and positively charged ions on the culture surface.
For coating of a 25 cm^2 culture dish it is recommended to use 1.0 ml of a 0.1 mg/ml solution. Remove the solution after 5 minutes through aspiration and thoroughly rinse the surface. Let dry for two hours before introducing cells and medium.
Can also be used for coating of glass coverslips.

Cat.No.	Size
33225.01	25 mg

Polyamide-6-powder research grade

(Polycaprolactam; Perlon; Nylon-6)
HS 39081000

For column chromatography.

Cat.No.	Size
33143.02	100 g

Polyclar® AT pract.

CAS [9003-39-8]

WGK 1 ♦ HS 39049000

Water-insoluble polyvinylpyrrolidone for binding phenols.

Heavy metals (Pb) max. 10 ppm

Polyclar = registered trademark of GAF Corp. USA.

References:
1. Loomis, W.D. & Bataille, J. (1966) Phytochemistry ***5,*** 423-38

Cat.No.	Size
33162.01	100 g
33162.02	500 g

Polyethylene glycol 4000 Ph. Eur., USP

(PEG 4000; Macrogol 4000; Macrogol)
CAS [25322-68-3]

EINECS 500-038-2(NLP) ♦ WGK 1L ♦ HS 34042000

Degree of polymerization ca. 70 - 80.
Polyethylene glycol for chromatography, histology, microscopy and for special biochemical purposes.

Average M_r 3600 - 4400
Hydroxyl value 26.0 - 31.0
Heavy metals (Pb) max. 5 ppm

Cat.No.	Size
33136.01	500 g
33136.02	5 kg

Polyethylene glycol 6000 Ph. Eur., USP

(PEG 6000; Macrogol 6000)
CAS [25322-68-3]

EINECS 500-038-2(NLP) ♦ WGK 1L ♦ HS 34042000

Degree of polymerization ca. 140 - 170.
Polyethylene glycol for chromatography, histology, microscopy and for special biochemical purposes.

Average M_r 5400 - 6600
Hydroxyl value 17.0 - 21.0

Cat.No.	Size
33137.01	500 g
33137.02	5 kg

Polyethylene glycol 6000 molecular biology grade

(PEG 6000; Macrogol 6000)
CAS [25322-68-3]

EINECS 500-038-2(NLP) ♦ WGK 1L ♦ HS 34042000

Degree of polymerization ca. 140 - 170.
DNase/RNase not detected. Polyethylene glycol for chromatography, histology, microscopy and for special biochemical purposes.

Average M_r 5400 - 6600

Cat.No.	Size
39778.01	500 g

Polyethylene glycol 20 000 Ph. Eur., USP

(PEG 20000; Macrogol 20000)
CAS [25322-68-3]

EINECS 500-038-2(NLP) ♦ WGK 1L ♦ HS 34042000

Degree of polymerization ca. 400 - 500.
Polyethylene glycol for chromatography, histology, microscopy and for special biochemical purposes.

Average M_r 16 000 - 25 000
Hydroxyl value 4.5 - 7.0

Cat.No.	Size	EUR
33138.01	500 g	24,00
33138.02	5 kg	121,00

Polyethylene glycol 40 000 Ph. Eur., USP

(PEG 35000; Macrogol 35000)
CAS [25322-68-3]

EINECS 500-038-2(NLP) ♦ WGK 1L ♦ HS 34042000

Degree of polymerization ca. 800 - 900.
Polyethylene glycol for chromatography, histology, microscopy and for special biochemical purposes.

Heavy metals (Pb) max. 5 ppm

Cat.No.	Size
33139.01	500 g
33139.02	5 kg

Polyethylenimine 50 % solution in water pract.

(Polymin P)

WARNING
H302-H317-H319-H411 ♦ GGVSE/ADR 9 III UN3082 ♦ IATA 9 III UN3082 ♦ WGK 2 ♦ HS 39019090

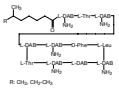
Crosslinked polyethylenimine is used as enzyme carrier.

Non-volatile matter 48.0 - 52.0 %

Cat.No.	Size
33141.03	100 ml
33141.04	500 ml

Polymyxin-B·sulfate research grade, Ph. Eur.

(Aerosporin)
CAS [1405-20-5]



WARNING
H302 ♦ HS 38210000
Storage temperature +2 °C to +8 °C

Mixture of the sulfates of polypeptides produced by the growth of certain strains of *Bacillus polymyxa*, the main component being Polymyxin B1.
Assay (HPLC): sum of Polymyxins B1, B2, B3 and B1-I min. 80 %; Polymyxin B3 max. 6 %; Polymyxin B1-I max. 15 % (all data based on dried substance).
Peptide antibiotic that mainly acts against gram negative bacteria. Causes changes in membrane structure resulting in leakage of small molecules. Used in cell culture media against the contamination of bacteria or in other media for suppression of pathogenic germs (2,3). Inhibitor of the mitogenic response to lipopolysaccharide (4).

References:
1. Storm, D.R. et al. (1977) Ann. Rev. Biochem. ***46,*** 723-63
2. Kwak, B. et al. (2000) Nature Medicine ***6***, 1399-1402
3. Alvarez-Dolado, M. et al. (2003) Nature ***425***, 968-73
4. Jacobs, D.M. & Morrison, D.C. (1977) J. Immunol. ***118***, 21-7
5. Asea, A. et al. (2000) Nature Medicine ***6***, 435-42

Cat.No.	Size
47976.03	1 g

Polyoxyethylene monolauryl ether

see 15230 Brij 35™, page 22

Polysorbate 20

see 39796 Tween® 20, page 153

Polysorbate 80

see 37475 Tween® 80, page 154

Polysorbate 80 VG Ph. Eur., USP/NF

(Montanox® 80; Tween® 80; Polyoxyethylene sorbitane monooleate, n ca. 20)
M_r ca. 1300 ♦ CAS [9005-65-6]

EINECS 500-019-9 ♦ WGK 1L ♦ HS 34021300

The fatty acids of this detergent are of vegetable origin.

HLB	15.0
CMC	1 x 10^{-5} mol/l
d25 °C	1.06 - 1.09
Acid number	max. 2.0 mg/KOH/g
Hydroxyl number	65 - 80 mg/KOH/g
Saponification number	45 - 55 mg/KOH/g
Peroxide value	max. 5 meq/kg
Heavy metals (Pb)	max. 10 ppm

Montanox = registered trademark of Seppic, France.

References:

1. Sato, M. et al. (1989) Int. J. Biochem. ***21,*** 751-4
2. Masaki, S. et al. (1990) Microbiol. Immunol. ***34,*** 653-63
3. Okuno, S. & Fujisawa, H. (1990) Biochim. Biophys. Acta ***1038,*** 204-8

Cat.No.	Size
33116.01	500 g

Polyvinylpyrrolidone 15 pract.

M_r ca. 10000 ♦ CAS [9003-39-8]

WGK 1 ♦ HS 39059990

Polyvinylpyrrolidone 15 is a water-soluble polymer used in tissue and biomedical engineering, pharmaceutical applications and cosmetics.

Intrinsic viscosity (K-value) ca. 15.0

Cat.No.	Size
33422.01	100 g
33422.02	1 kg

Polyvinylpyrrolidone 30

M_r ca.40 000 ♦ CAS [9003-39-8]

HS 39059990

Polyvinylpyrrolidone 30 is a water-soluble polymer used in tissue and biomedical engineering, pharmaceutical applications and cosmetics.

Intrinsic viscosity (K-value) 27.0 - 33.0

Cat.No.	Size
33421.01	100 g
33421.02	1 kg

Polyvinylpyrrolidone 25 pract., Ph. Eur., USP

(Collidon; Plasdone)
M_r ca. 29000 ♦ CAS [9003-39-8]

WGK 1 ♦ HS 39059990

Polyvinylpyrrolidone 25 is a water-soluble polymer used in tissue and biomedical engineering, pharmaceutical applications and cosmetics.

Intrinsic viscosity (K-value)	22.5 - 27.0
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
33420.02	250 g
33420.03	1 kg

Polyvinylpyrrolidone 90 pract.

M_r ca. 1 100000 ♦ CAS [9003-39-8]

WGK 1 ♦ HS 39059990

Polyvinylpyrrolidone 90 (PVP 90) is used as cryoprotectant, in hybridization buffers like Denhardt's, for RNA isolation from plants rich in polyphenols, in tissue and biomedical engineering.

Intrinsic viscosity (K-value) 90.0 - 100.0

Cat.No.	Size
33410.01	100 g
33410.02	1 kg

Polyvinylsulfate·K-salt

$(C_2H_3O_4S)\cdot K)_n$ ♦ M_r $(170.000)_n$, n ≥1500 ♦ CAS [26837-42-3]

WGK 1 ♦ HS 39059990

Polyvinylsulfate-K-salt is used, among other things, in polyelectrolyte titration for the determination of polycations. It can also be used in the potentiodynamic electropolymerisation of pyrrole.

Cat.No.	Size
33425.01	2,5 g
33425.02	10 g

Polyvinylsulfate·K-salt pure

$(C_2H_3O_4S)\cdot K)_n$ ♦ M_r $(162.21)_n$, n ≥1500 ♦ CAS [26837-42-3]

WGK 1 ♦ HS 39059990

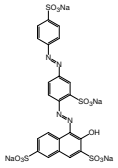
Polyvinylsulfate-K-salt is used, among other things, in polyelectrolyte titration for the determination of polycations. It can also be used in the potentiodynamic electropolymerisation of pyrrole.

Cat.No.	Size
33426.02	2,5 g
33426.03	10 g

Ponceau S

(Acid Red 112; Fast Ponceau 2B)
C.I.27195 ♦ $C_{22}H_{12}N_4O_{13}S_4\cdot Na_4$ ♦ M_r 760.61 ♦
CAS [6226-79-5]

WARNING
H315-H319-H335 ♦ EINECS 228-319-2 ♦ WGK 2L ♦ HS 29270000



For reversible protein staining on membranes and for microscopy.

λ max. 0.001 % in water	517- 523 nm
Water (KF)	max. 15.0 %
A 1 cm/0.001 % in water/λ max.	min. 0.355
ϵλmax in water	min. 27 000
TLC	corresponds

Cat.No.	Size
33429.01	5 g
33429.02	25 g

Ponceau S solution for electrophoresis (0.2 %)

DANGER
H314-H412 ♦ GGVSE/ADR 9 III UN3082 ♦ IATA 9 III UN3082 ♦ WGK 2 ♦ HS 38220000

In 3 % TCA. For reversible protein staining on membranes.

Cat.No.	Size
33427.01	500 ml

Potassium acetate molecular biology grade

$C_2H_3O_2K$ ♦ M_r 98.14 ♦ CAS [127-08-2]

EINECS 204-822-2 ♦ WGK 1L ♦ HS 29152900

DNase/RNase not detected.

Assay (titr.)	min 99.0 %
Heavy metals (as Pb)	max. 0.001 %
pH 5 % in water	7.5 - 9.0

Cat.No.	Size
39567.02	500 g

Potassium chloride research grade, Ph. Eur.

KCl ♦ M_r 74.55 ♦ CAS [7447-40-7]

EINECS 231-211-8 ♦ WGK 1L ♦ HS 28273985

Assay (titr.)	99.0 - 100.5 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
26868.02	1 kg

Potassium chloride molecular biology grade

KCl ♦ M_r 74.6 ♦ CAS [7447-40-7]

EINECS 231-211-8 ♦ WGK 1L ♦ HS 28273985

DNase/RNase not detected.

Assay (titr.)	min. 99.0 %
Heavy metals (as Pb)	max. 10 ppm
Fe	max. 20 ppm

Cat.No.	Size
39768.01	500 g

Potassium dihydrogen phosphate anhydrous
analytical grade, Ph. Eur.

(Potassium biphosphate; Potassium phosphate monobasic (prim. potassium phosphate))
KH_2PO_4 ♦ M_r 136.1 ♦ CAS [7778-77-0]

EINECS 231-913-4 ♦ WGK 1 ♦ HS 28352400

Biochemical and enzyme standard. Buffering substance according to Sörensen. 9.072 g in 1 liter water = 1/15 M. Tested for use in tissue culture.

Assay (titr.)	98.0 % - 100.5 %
pH 5 % in water	4.2
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
26870.01	500 g
26870.02	1 kg

Potassium dihydrogen phosphate anhydrous
analytical grade

(Potassium phosphate monobasic (prim. potassium phosphate); Potassium biphosphate)
KH_2PO_4 ♦ M_r 136.1 ♦ CAS [7778-77-0]

EINECS 231-913-4 ♦ HS 28352400

Buffering substance for biochemistry and enzymology.

Assay (titr.)	min. 98 % - 100 %
pH 5 % in water	4.2 - 4.5
Heavy metals	max. 0.001 %
Nitrogen (N)	max. 0.001 %
Sodium (Na)	max. 0.02 %

Cat.No.	Size
26871.01	1 kg

di-Potassium hydrogen phosphate anhydrous
analytical grade

(Dipotassium hydrogen phosphate; Potassium phosphate dibasic (sec. potassium phosphate))
K_2HPO_4 ♦ M_r 174.18 ♦ CAS [7758-11-4]

EINECS 231-834-5 ♦ WGK 1 ♦ HS 28352400

Buffering substance for biochemistry and enzymology.

Assay	min. 99.0 %
pH 5 % in water	8.7 - 9.3
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
26887.01	500 g
26887.02	1 kg

Precast Gels for IEF
see 42965 SERVALYT™ PRECOTES™ Wide Range pH 3-10, page 132

PRECOTES™
see 42965 SERVALYT™ PRECOTES™ Wide Range pH 3-10, page 132

PreNets™
see 42738 SERVALYT™ PreNets™ pH 3-10, page 133

L-Proline research grade, Ph. Eur.

(Pro; 2-Pyrrolidinecarboxylic acid)
$C_5H_9NO_2$ ♦ M_r 115.13 ♦ CAS [147-85-3]

EINECS 205-702-2 ♦ WGK 1L ♦ HS 29224985

Assay (titr.) 98.5 - 101.0 %

Cat.No.	Size
33582.02	50 g

Pronase E from *Streptomyces griseus* min. 5.0 DMC-U/mg lyophil.

(Streptomyces griseus neutral proteinase; Actinase E)
CAS [9036-06-0]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-014-00-9 ♦ EINECS 232-909-5 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Mixture of at least 10 proteases: five serine type proteases, two zinc endopeptidases, two zinc leucine aminopeptidases and one zinc carboxypeptidase. Digestion with the product has been useful when extensive or complete degradation of protein is required. Pronase E is used in tissue dissociation of various tissues, e.g. to isolate living chondrocytes. Additional applications are the structural analysis of proteins (1, 2), preparation of bacteriophage lambda DNA (3), pretreatment of tissue sections to enhance the intensity of immunostaining and removal of protein in DNA/RNA isolations.

Activity: min. 5.0 DMC U/mg
Unit definition: 1 DMC-U (1U) is that amount of enzymatic activity which catalyzes the cleavage of 1 µ-equivalent peptide bond from dimethyl casein per minute at 25 °C, pH 7.5, expressed in terms of the appearance of new terminal amino groups (4).
Activity in other units: ca. 1 000 000 PU-units/g (casein substrate; 40 °C, pH 7.4 (5), ca. 20 000 PUK-units/g (casein substrate, 40 °C, pH 7.5).

Pronase = registered trademark of Calbiochem-Novabiochem Corp.

References:

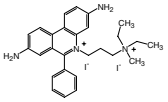
1. Jehanli, A. & Hough, D. (1985) Mol. Immunol. ***22***, 557-66
2. Tsugita, A. & Akabori, S. (1959) J. Biochem. (Tokyo) ***46,*** 695-704
3. Maniatis, T. et al. (1982) Molecular Cloning - a Laboratory Manual. Cold Spring, Harbor Laboratory, p. 85
4. Lin, Y. et al. (1969) J. Biol. Chem. ***244,*** 789-93
5. Nomoto, M. & Narashi, Y. (1959) J. Biochem. (Tokyo) ***46,*** 653-67

Cat.No.	Size
33635.01	250 mg
33635.02	1 g
33635.03	5 g

2-Propanone
see 45632 Aceton, page 2

Propidium iodide research grade

(3,8-Diamino-5-(3-[diethylmethylammonio]propyl)-6-phenylphenan-thridinium· diiodide)
$C_{27}H_{34}N_4^{2+}\cdot 2I^-$ ♦ M_r 668.4 ♦ CAS [25535-16-4]



WARNING
H315-H319-H335-H341 ♦ EINECS 247-081-0 ♦ WGK 2 ♦ HS 29239000
Storage temperature +2 °C to +8 °C

For selective labelling of DNA in dead cells; used in tumor diagnosis (flow cytometry) (1, 2). For the study of micronuclear morphology of protozoa (3).

References:

1. Valet, G. et al. (1987) Blut ***49,*** 37-43
2. ibid. (1984) J. Clin. Chem. Clin. Biochem. ***22,*** 935-42
3. Fox, D.P. et al. (1987) Stain Technol. ***62,*** 217-20

Cat.No.	Size
33671.01	25 mg

β-Propiolactone research grade

(2-Oxetanone; 3-Hydroxypropionic acid lactone)
$C_3H_4O_2$ ♦ M_r 72.06 ♦ CAS [57-57-8]

DANGER
H315-H319-H330-H350 ♦ Carc. 1B ♦ EG-Index 606-031-00-1 ♦ GGVSE/ADR 6.1 II UN2810 ♦ IATA 6.1 II UN2810 ♦ EINECS 200-340-1 ♦ WGK 3 ♦ HS 29322090
Storage temperature -15 °C to -25 °C ❄❄

Miscibility with water 37 %. Polymerizes on warming and in the presence of ions (1). For enzyme sterilization (2). Carcinogen (3).

Assay (H-NMR) min. 98.5 %

References:
1. Gresham, T.L. et al. (1948) J. Am. Chem. Soc. ***70,*** 998-9
2. Stokes, K.J. (1971) J. Clin. Pathol. ***24,*** 658-60
3. Poirier, L.A. et al. (1979) J. Natl. Cancer Inst. ***62,*** 833-40

Cat.No.	Size
33672.01	10 ml

Propylene oxide research grade

(1,2-Epoxypropane)
C_3H_6O ♦ M_r 58.08 ♦ CAS [75-56-9]

DANGER
H224-H302-H312-H315-H319-H332-H335-H340-H350 ♦ Muta. 1B, Carc. 1B ♦ MAK/TRK
6 mg/m³, 2.5 ml/m³ ♦ EG-Index 603-055-00-4 ♦ GGVSE/ADR 3 I UN1280 ♦ IATA 3 I UN1280 ♦ EINECS 200-879-2 ♦ WGK 3L ♦ HS 29102000

Solvent used in the last stage of dehydration of tissue for epoxy embedding in electron microscopy.

Content min. 99 %

Cat.No.	Size
33715.01	1 L

Protease-Inhibitor Mix G

WGK 2 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Special mixture of 5 water-soluble protease inhibitors with broad specificity for the inhibition of cysteine-, serine- and metalloproteases. Recommended for general applications and where the use of organic solvents should be avoided. Contains AEBSF, Aprotinin, E-64, Leupeptin and EDTA.
The content of 1 vial dissolved in 1 ml water results in a 100-fold concentrate suitable for the treatment of 100 ml tissue extract.

Cat.No.	Size
39101.01	1 vial
39101.02	5 vials
39101.03	10 vials

Protease-Inhibitor Mix B

WGK 1 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Mixture of 5 protease inhibitors with broad range of activity against aspartate-, cysteine-, serine-, and metallo proteases as well as aminopeptidases. It is especially formulated for use with bacterial extracts. Contains AEBSF, Bestatin, E-64, Pepstatin A and EDTA.
Supplied as a kit: each vial is provided with an extra vial of 1 ml DMSO. The content of 1 vial dissolved in 1 ml DMSO will give a 100-fold concentrate, suitable for the treatment of 100 ml extract.

Cat.No.	Size
39105.01	1 vial
39105.02	5 vials
39105.03	10 vials

Protease-Inhibitor Mix FY

DANGER
H301-H410 ♦ GGVSE/ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦ EINECS 200-664-3 ♦ WGK 1 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Special mixture of 4 protease inhibitors with broad specificity for the inhibition of aspartate-, cysteine-, serine-, and metallo proteases. It is especially formulated for use with fungal and yeast extracts. Contains AEBSF, E-64, Pepstatin A, and 1,10-Phenanthroline.
Supplied as a kit: each vial is provided with an extra vial of 1 ml DMSO. The content of 1 vial dissolved in 1 ml DMSO will give a 100-fold concentrate, suitable for the treatment of 100 ml extract.

Cat.No.	Size
39104.01	1 vial
39104.02	5 vials
39104.03	10 vials

Protease-Inhibitor Mix P

DANGER
H301-H410 ♦ GGVSE/ADR 6.1 III UN2811 ♦ IATA 6.1 III UN2811 ♦ EINECS 200-664-3 ♦ WGK 2 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Special mixture of 6 protease inhibitors with broad range of activity for the inhibition of aspartate-, cysteine-, serine-, and metallo proteases as well as aminopeptidases. It is especially formulated for use with plant extracts. Contains AEBSF, Bestatin, E-64, Leupeptin, Pepstatin A, and 1,10-Phenanthroline.
Supplied as a kit: each vial is provided with an extra vial of 1 ml DMSO. The content of 1 vial dissolved in 1 ml DMSO will give a 100-fold concentrate, suitable for the treatment of 100 ml extract.

Cat.No.	Size
39103.01	1 vial
39103.02	5 vials
39103.03	10 vials

Protease-Inhibitor Mix M

EINECS 200-664-3 ♦ WGK 1 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Mixture of 6 protease inhibitors with broad spectrum of activity for the inhibition of aspartate-, cysteine-, and serine-proteases as well as aminopeptidases (metallo-proteases). It is especially formulated for use with extracts from mammalian tissue, but can also be used with other extracts. It is free of EDTA and contains AEBSF, Aprotinin, Bestatin, E-64, Leupeptin and Pepstatin A.
Supplied as a kit: each vial is provided with an extra vial of 1 ml DMSO. The content of 1 vial dissolved in 1 ml DMSO will give a 100-fold concentrate, suitable for the treatment of 100 ml extract.

Cat.No.	Size
39102.01	1 vial
39102.02	5 vials
39102.03	10 vials

Protease-Inhibitor Mix HP

HS 38220000
Storage temperature -15 °C to -25 °C

Special mixture of 4 water-soluble protease inhibitors with broad specificity for the inhibition of cysteine- and serine-proteases. Free of metal-chelators. Recommended for purification of polyHis-tagged proteins and for other applications where metal-chelators should be avoided. Contains AEBSF, Aprotinin, E-64, and Leupeptin.
The content of 1 vial dissolved in 1 ml water will give a 100-fold concentrate suitable for the treatment of 100 ml tissue extract.

Cat.No.	Size
39106.01	1 vial
39106.02	5 vials
39106.03	10 vials

Protease-Inhibitor Mix HP PLUS

HS 38220000
Storage temperature -15 °C to -25 °C

Mixture of 6 protease inhibitors with broad spectrum of activity for the inhibition of aspartate-, cysteine-, and serine proteases as well as aminopeptidases, Thermolysin and other microbial metalloendoproteases. It is especially recommended for purification of polyHis-tagged proteins and for other applications, where metal-chelators should be avoided. Contains AEBSF, Bestatin, E-64, Leupeptin, Pepstatin A, and Phosphoramidon.
Supplied as a kit; each vial is provided with an extra vial of 1 ml DMSO. The content of 1 vial dissolved in 1 ml DMSO will give a 100-fold concentrate, suitable for the treatment of 100 ml extract.

Cat.No.	Size
39107.01	1 vial
39107.02	5 vials
39107.03	10 vials

Proteasome Inhibitor MG-132

(Carbobenzoxy-L-leucyl-L-leucyl-leucinal; Z-Leu-Leu-Leu-H (aldehyde))
$C_{26}H_{41}N_3O_5$ ♦ M_r 475.62 ♦ CAS [133407-82-6]

HS 29420000
Storage temperature -15 °C to -25 °C

Potent, reversible and cell-permeable proteasome inhibitor.

Assay (HPLC) min. 90.0 %

References:
1. Saito, Y. et al. (1990) Neurosci. Lett. ***120***, 1
2. Jensen, T.J. et al. (1995) Cell ***83***, 129
3. Lee, D.H. a. Goldberg, A.L. (1996) J. Biol. Chem. ***271***, 27280

Cat.No.	Size
33766.02	5 mg

Protein A Buffer Pack

HS 38220000

Contents:
1 x Binding Buffer pH 9.0 A (250 ml)
1 x Elution Buffer pH 5.5 B1 (125 ml)
1 x Elution Buffer pH 2.5 B2 (125 ml)
1 x Neutralization Buffer pH 9.0 C (30 ml)

Cat.No.	Size
42275.01	1 kit

Protein A Midi Bulk Pack Midi A Plugs

HS 38220000

The Midi Protein A & G spin column permits semi-preparative purification of concentrated monoclonal and polyclonal antibodies for all downstream applications. Both the Mini and Midi kits contain all the resin spin columns, buffers and ultrafiltration spinners necessary for rapid and convenient purifications of your target antibodies.

Contents:
Quantity: 12 x 1.6 ml Protein A Midi spin columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 24 x 20 ml centrifuge tubes
Min. number of purifications: 60 purifications (5 uses per column)
Typical capacity/preparation: 20 mg human IgG

Cat.No.	Size
42259.01	12 pieces

Protein A Midi Kit - 4 Midi A Plugs

HS 38220000

The Midi Protein A & G spin column permits semi-preparative purification of concentrated monoclonal and polyclonal antibodies for all downstream applications. Both the Mini and Midi kits contain all the resin spin columns, buffers and ultrafiltration spinners necessary for rapid and convenient purifications of your target antibodies.

Contents:
Quantity: 4 x 1.6 ml Protein A Midi spin columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 8 x 20 ml centrifuge tubes
Min. number of purifications: 20 purifications (5 uses per column)
Typical capacity/preparation: 20 mg human IgG
Vivaspin 20 ultrafiltration concentrators: 4
Buffers: 1 x Binding Buffer pH 9.0 A (250 ml), 1 x Elution Buffer pH 5.5 B1 (125 ml), 1 x Elution Buffer pH 2.5 B2 (125 ml), 1 x Neutralization Buffer pH 9.0 C (30 ml)

Cat.No.	Size
42258.01	1 kit

Protein A Mini Bulk Pack Mini A Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 48 x 0.23 Protein A Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 144 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG

Cat.No.	Size
42257.01	48 pieces

Protein A Mini Kit - 16 Mini A Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 16 x 0.23 Protein A Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 48 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG
Vivaspin 500 ultrafiltration concentrators: 16
Buffers: 1 x Binding Buffer pH 9.0 A, 1 x Elution Buffer pH 5.5 B1, 1 x Elution Buffer pH 2.5 B2, 1 x Neutralization Buffer pH 9.0 C

Cat.No.	Size
42256.01	1 kit

Protein A Mini Sample Kit: 2 Mini A Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 2 x 0.23 Protein A Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 6 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG
Vivaspin 500 ultrafiltration concentrators: 2
Buffers: 1 x Binding Buffer pH 9.0 A, 1 x Elution Buffer pH 5.5 B1, 1 x Elution Buffer pH 2.5 B2, 1 x Neutralization Buffer pH 9.0 C

Cat.No.	Size
42255.01	1 kit

Protein A Mini Sample Pack: 1 Mini A Plug

HS 38220000

Cat.No.	Size
42254.01	1 piece

Protein G Buffer Pack

HS 38220000

Contents:
1 x Binding Buffer pH 9.0 A (250 ml)
1 x Elution Buffer pH 2.5 B2 (125 ml)
1 x Neutralization Buffer pH 9.0 C (30 ml)

Cat.No.	Size
42276.01	1 kit

Protein G Midi Bulk Pack Midi G Plugs

HS 38220000

The Midi Protein A & G spin column permits semi-preparative purification of concentrated monoclonal and polyclonal antibodies for all downstream applications. Both the Mini and Midi kits contain all the resin spin columns, buffers and ultrafiltration spinners necessary for rapid and convenient purifications of your target antibodies.

Contents:
Quantity: 12 x 1.6 ml Protein G Midi spin columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 24 x 20 ml centrifuge tubes
Min. number of purifications: 60 purifications (5 uses per column)
Typical capacity/preparation: 20 mg human IgG

Cat.No.	Size
42265.01	12 pieces

Protein G Midi Kit - 4 Midi G plugs

HS 38220000

The Midi Protein A & G spin column permits semi-preparative purification of concentrated monoclonal and polyclonal antibodies for all downstream applications. Both the Mini and Midi kits contain all the resin spin columns, buffers and ultrafiltration spinners necessary for rapid and convenient purifications of your target antibodies.

Contents:
Quantity: 4 x 1.6 ml Protein G Midi spin columns
Max. sample volume per load: 20 ml, swing bucket rotor
Collection tube: 8 x 20 ml centrifuge tubes
Min. number of purifications: 20 purifications (5 uses per column)
Typical capacity/preparation: 20 mg human IgG
Vivaspin 20 ultrafiltration concentrators: 4
Buffers: 1 x Binding Buffer pH 9.0 A (250 ml), 1 x Elution Buffer pH 2.5 B2 (125 ml), 1 x Neutralization Buffer pH 9.0 C (30 ml)

Cat.No.	Size
42264.01	1 kit

Protein G Mini Bulk Pack Mini G Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 48 x 0.23 Protein G Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 144 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG

Cat.No.	Size
42263.01	48 pieces

Protein G Mini Kit: 16 Mini G Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 16 x 0.23 Protein G Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 48 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG
Vivaspin 500 ultrafiltration concentrators: 16
Buffers: 1 x Binding Buffer pH 9.0 A, 1 x Elution Buffer pH 2.5 B2, 1 x Neutralization Buffer pH 9.0 C

Cat.No.	Size
42262.01	1 kit

Protein G Mini Sample Kit: 2 Mini G Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 2 x 0.23 Protein G Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 6 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG
Vivaspin 500 ultrafiltration concentrators: 2
Buffers: 1 x Binding Buffer pH 9.0 A, 1 x Elution Buffer pH 2.5 B2, 1 x Neutralization Buffer pH 9.0 C

Cat.No.	Size
42261.01	1 kit

Protein G Mini Sample Pack Mini G Plug

HS 38220000

Cat.No.	Size
42260.01	1 piece

Protein Molecular Weight Standards

HS 38220000
Storage temperature -15 °C to -25 °C

To determine the molecular weight of proteins separated in polyacrylamide gels in their native state SERVA offers a set of 8 proteins.
Proteins are either in solution or lyophilized, the lyophilized proteins can easily be dissolved in water or sample buffer. The molecular weights of the proteins range from 12.300 Da (Cytochrome C) up to 450.000 Da (Ferritin horse).
Please note: In the presence of SDS most of the proteins will fall into their subunits, therefore this marker should not be used for SDS PAGE.

25 mg of each. For native electrophoresis.

Ferritin horse	M_r 450 000
Catalase bovine	M_r 240 000
Aldolase rabbit	M_r 160 000
Albumin bovine (BSA)	M_r 67 000
Albumin egg	M_r 45 000
Chymotrypsinogen A	M_r 25 000
Myoglobin equine	M_r 17 800
Cytochrome C	M_r 12 300

Cat.No.	Size
39064.01	1 kit

Protein Standards (Markers) for IEF

see 39212 IEF Marker 3-10, Liquid Mix, page 67

Protein Test Mixture 4 for SDS PAGE

DANGER
H334 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Molecular weight markers for SDS gel electrophoresis. The bovine albumin (BSA) contains monomers and oligomers.
Reconstitute with SDS sample buffer (125 mM Tris-HCl pH 6.8, 2 % SDS, 15 % glycerol, 10 mM DTT, 0.025 % bromophenol blue, 0.025 % Orange G) to final concentration of 1 mg/ml and apply 5 µl per lane when staining with SERVA Blue G, SERVA Blue R or Coomassie®.
For silver staining, e.g. using SERVA's Silver Staining Kit (cat.no. 39076), dilute 1:5 in 1x Laemmli buffer and apply 5 µl.

Phosphorylase B	M_r 97 400
Albumin bovine (BSA)	M_r 67 000
Albumin egg	M_r 45 000
Carbonic anhydrase	M_r 29 000

Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
39208.01	10 mg

Protein Test Mixture 5 for SDS PAGE

DANGER
H302-H334-H341-H361D ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Molecular weight markers for SDS gel electrophoresis. Reconstitute with SDS sample buffer (125 mM Tris-HCl pH 6.8, 2 % SDS, 15 % glycerol, 10 mM DTT, 0.025 % bromophenol blue, 0.025 % Orange G) to final concentration of 1 mg/ml and apply 5 µl per lane when staining with SERVA Blue G, SERVA Blue R or Coomassie®.
For silver staining, e.g. using SERVA's Silver Staining Kit (cat.no. 39076), dilute 1:5 in 1x Laemmli buffer and apply 5 µl.

Carbonic anhydrase	M_r 29 000
Trypsin inhibitor (soybean)	M_r 21 000
Cytochrome C	M_r 12 300
Trypsin inhibitor (bovine lung)	M_r 6 500

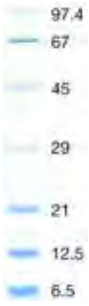
Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
39209.01	10 mg

Protein Test Mixture 6 for SDS PAGE

DANGER
H334 ♦ WGK 1 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Molecular weight markers for SDS gel electrophoresis. Reconstitute with SDS sample buffer (125 mM Tris-HCl pH 6.8, 2 % SDS ,15 % glycerol, 10 mM DTT, 0.025 % bromophenol blue, 0.025 % Orange G) to final concentration of 1 mg/ml and apply 5 µl per lane when staining with SERVA Blue G, SERVA Blue R or Coomassie®.
For silver staining, e.g. using SERVA's Silver Staining Kit (cat.no. 39076), dilute 1:5 in 1x Laemmli buffer and apply 5 µl.



Phosphorylase B	M_r 97 400
Albumin bovine (BSA)	M_r 67 000
Albumin egg	M_r 45 000
Carbonic anhydrase	M_r 29 000
Trypsin inhibitor (soybean)	M_r 21 000
Cytochrome C	M_r 12 300
Trypsin inhibitor (bovine lung)	M_r 6 500

Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
39207.01	10 mg

Protein Test Mixture for pI-Determination, pH 3-10

DANGER
H334-H341 ♦ WGK 1 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Lyophilized pI marker proteins for pI determination by isoelectric focusing (IEF). Reconstitute dry powder with 1 ml water (concentration: 10 mg/ml).

Amyloglucosidase	pI 3.5
Glucose oxidase	pI 4.2
Trypsin inhibitor	pI 4.5
β-Lactoglobulin	pI 5.15/5.3
Myoglobin horse	pI 6.9/7.35
Lentil lectin	pI 7.75/8.0/8.3
Ribonuclease A	pI 9.45
Cytochrome C	pI 10.65
Carboanhydrase	pI 6.0

Cat.No.	Size
39211.01	10 mg

Proteinase K from *Tritirachium album*

solution 20 mg solid/ml, ≥ 600 mAnson-U/ml

EC 3.4.21.14 ♦ M_r M_r 28.000

DANGER
H334 ♦ WGK 1 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Serine protease with very broad range of action: cleaves peptide bonds at the carboxylic side of aliphatic, aromatic, and hydrophobic amino acids. Suitable for the isolation of DNA and RNA (1, 3).

Unit definition: 1 mAnson unit is defined as the amount of enzyme that liberates folin-positive amino acids and peptides, corresponding to 1 µmol tyrosine per minute at 37 °C and pH 7.4 using urea-denatured hemoglobin as substrate (4).

Activity (U/ml): ≥ 600

Inhibitors for proteinase: AEBSF (cat. no. 12745), (PEFABLOC® SC (cat.no. 31682), PMSF (cat. no. 32395) and diisopropylfluorophosphate.
Extraneous activities: DNases and RNases not detectable.

References:
1. Ebeling, W. et al.(1974) Eur. J. Biochem. ***47***, 91-7
2. Lin, Y. et al.(1969) J. Biol. Chem. ***244***, 789-93
3. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (B.16, 1.61)
4. Anson, M.L. (1938) J. Gen. Physiol. ***22***, 79-98

Cat.No.	Size
33755.01	1 ml
33755.02	5 ml
33755.03	10 ml

Proteinase K from *Tritirachium album* min. 30 mAnson-U/mg lyophil.

EC 3.4.21.14 ♦ M_r ca. 28 000 ♦ CAS [39450-01-6]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-014-00-9 ♦ EINECS 254-457-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Serin protease with very broad range of action: cleaves peptide bonds at the carboxylic side of aliphatic, aromatic, and hydrophobic amino acids. Suitable for the isolation of DNA and RNA (1, 3).

Unit definition: 1 mAnson unit is defined as the amount of enzyme that liberates folin-positive amino acids and peptides, corresponding to 1 µmol tyrosine per minute at 37 °C and pH 7.4 using urea-denatured hemoglobin as substrate (4).

Activity (U/ml): ≥ 600

Inhibitors for proteinase: AEBSF (cat. no. 12745), (PEFABLOC® SC (cat.no. 31682), PMSF (cat. no. 32395)
Extraneous activities: DNases and RNases not detectable.

References:
1. Ebeling, W. et al.(1974) Eur. J. Biochem. ***47,*** 91-7
2. Lin, Y. et al.(1969) J. Biol. Chem. ***244,*** 789-93
3. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (B.16, 1.61)
4. Anson, M.L. (1938) J. Gen. Physiol. ***33,*** 79-89

Cat.No.	Size
33752.01	25 mg
33752.02	100 mg
33752.03	500 mg

Proteinase K, recombinant, min. 30 mAnson-U/mg

lyophil., molecular biology grade

EC 3.4.21.14 ♦ M_r ca. 28 000 ♦ CAS [39450-01-6]

DANGER
H315-H319-H334-H335 ♦ EINECS 254-457-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

A recombinant proteinase K from *Tritirachium album* expressed in *Pichia pastoris*. Subtilisin-related serine protease with a very high specific activity and a broad spectrum of action. It is widely used for digestion of proteins, including DNases and RNases during nucleic acid preparations without compromising the integrity of the isolated DNA or RNA.
Free of DNAse and RNase activity.

Unit definition: One unit will hydrolyze urea-denatured 2 % hemoglobin to produce color equivalent 1 µmol of tyrosine per minute at pH 7.5 at 37 °C (color by Fiolin & Ciocalteu's Phenol Reagent).

Cat.No.	Size
33756.02	100 mg
33756.03	500 mg

Proteinase K, recombinant, min. 35 mAnson-U/mg

lyophil., NGS grade

EC 3.4.21.14 ♦ M_r 28.900,00 ♦ CAS [39450-01-6]

DANGER
H315-H319-H334-H335 ♦ EINECS 254-457-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

A recombinant proteinase K from *Tritirachium album* expressed in *Pichia pastoris*.
Subtilisin-related serine protease with a very high specific activity and a broad spectrum of action. It is widely used for digestion of proteins, including DNases and RNases during nucleic acid preparations without compromising the integrity of the isolated DNA or RNA.
An extra purification step results in 2.5-fold increased solubility, increased specific activity and very low DNA content compared to other comercially available recombinant proteinase K preparations. Therefore it is especially suitable for methods demanding highest quality like Next Generation Sequencing (NGS).

- Free of endonucleases, exonucleases and ribonucleases
- Solubility in water: ≥ 50 mg/ml
- DNA: ≤0.1 pg/mg enzyme

Cat.No.	Size
33757.01	25 mg
33757.02	100 mg
33757.03	500 mg

Proteus 1-Step Batch Midi Plus Spin Columns

HS 38220000

Proteus 1-Step Batch Midi Plus Spin Columns are designed for small scale protein purifications such as those required for expression trials, solubility determination tests, screening, tittering and scouting studies.
These innovative columns incorporate a SelfSeal™ membrane technology which retains the resin and sample in the batch incubation chamber. When the column is spun in a benchtop centrifuge at 750 g, the pores of the membrane dilate and the filtered eluate is collected in the bottom of the centrifuge tube.

Specifications
Sinter type: ultra high density polyethylene
Construction: Polypropylene
Pore size: 0.1 - 0.2 µm low protein binding PVDF
SelfSeal: Proprietary coating
Maximum vol: 20 ml
Typical g force: 750 g
Typical spin times: 5 min for up to 20 ml sample at 750 g
Storage: Store at RT (non-sterile)
Shelf-life: 24 months

Cat.No.	Size
42239.01	8 pieces

Proteus 1-Step Batch Mini Spin Columns

HS 38220000

Proteus 1-Step Batch Mini Spin Columns are designed for small scale protein purifications such as those required for expression trials, solubility determination tests, screening, tittering and scouting studies.
These innovative columns incorporate a SelfSeal™ membrane technology which retains the resin and sample in the batch incubation chamber. When the column is spun in a microfuge at 12 - 14,000 g for up to 1 min, the pores of the membrane dilate and the filtered eluate is collected in the bottom of the centrifuge tube.

Specifications
Sinter type: ultra high density polyethylene
Construction: Polypropylene
Pore size: 0.1 - 0.2 µm low protein binding PVDF
SelfSeal: Proprietary coating
Maximum vol: 600 µl
Maximum g force: 12 – 14,000 g (45° fixed angle rotor)
Minimum g force: 2,500 g for 1 min
Typical spin times: 30 sec - 1 min for up to 0.6 ml sample at 12 - 14,000 g
Storage: Store at RT (non-sterile)
Shelf-life: 24 months

Cat.No.	Size
42237.01	40 pieces

Proteus 1-Step Batch Mini Spin Columns

HS 38220000

Proteus 1-Step Batch Mini Spin Columns are designed for small scale protein purifications such as those required for expression trials, solubility determination tests, screening, tittering and scouting studies.
These innovative columns incorporate a SelfSeal™ membrane technology which retains the resin and sample in the batch incubation chamber. When the column is spun in a microfuge at 12 - 14,000 g for up to 1 min, the pores of the membrane dilate and the filtered eluate is collected in the bottom of the centrifuge tube.

Specifications
Sinter type: ultra high density polyethylene
Construction: Polypropylene
Pore size: 0.1 - 0.2 µm low protein binding PVDF
SelfSeal: Proprietary coating
Maximum vol: 600 µl
Maximum g force: 12 – 14,000 g (45° fixed angle rotor)
Minimum g force: 2,500 g for 1 min
Typical spin times: 30 sec - 1 min for up to 0.6 ml sample at 12 - 14,000 g
Storage: Store at RT (non-sterile)
Shelf-life: 24 months

Cat.No.	Size
42238.01	100 pieces

Proteus Detergent Anion Exchange Mini Spin Column Kit (20 pc)

HS 38220000

Proteus Detergent Anion Exchange (DetEx) Mini Spin Columns designed for rapid and effective removal of free detergents micelles and complete detergent exchange. They are optimized for membrane proteins with pI <8 in complex with non-ionic or zwitterionic detergents. Simple and adaptable to your protein requiring only a microfuge for operation.
Ideal for applications such as ELISA, IEF, MS and NMR which suffer from interference with excess detergents.

Features:
Weak Anion Exchanger for binding membrane proteins with pI <8
Complete detergent exchange/removal
Column bed volume: 0.2 ml
Max. sample loading volume: 0.4 ml
Typical protein binding capacity: 2 mg
Elution in a small volume (minimum volume 50 µl)

Benefits:
Universal appeal as most proteins have a pI between 4 - 8
Rapid removal and exchange of free detergent micelles in 10 min
Generate concentrated protein free of detergent micelles
Only requires a microfuge for use

Cat.No.	Size
42241.01	1 kit

Proteus Detergent Anion Exchange Mini Spin Columns Trial Kit (4 pc)

HS 38220000

Proteus Detergent Anion Exchange (DetEx) Mini Spin Columns designed for rapid and effective removal of free detergents micelles and complete detergent exchange. They are optimized for membrane proteins with pI <8 in complex with non-ionic or zwitterionic detergents. Simple and adaptable to your protein requiring only a microfuge for operation.
Ideal for applications such as ELISA, IEF, MS and NMR which suffer from interference with excess detergents.

Features:
Weak Anion Exchanger for binding membrane proteins with pI <8
Complete detergent exchange/removal
Column bed volume: 0.2 ml
Max. sample loading volume: 0.4 ml
Typical protein binding capacity: 2 mg
Elution in a small volume (minimum volume 50 µl)

Benefits:
Universal appeal as most proteins have a pI between 4 - 8
Rapid removal and exchange of free detergent micelles in 10 min
Generate concentrated protein free of detergent micelles
Only requires a microfuge for use

Cat.No.	Size
42240.01	1 kit

Proteus Mini Clarification Spin Column, 0.2 µm PVDF membrane

HS 38220000

Proteus Mini Clarification Spin Columns are designed to remove microorganisms, particles and precipitates larger than 0.2 µm pore size from aqueous solutions. These are ideal for HPLC/FPLC sample preparation. The PVDF membrane provides high flow rates and throughput, low extractables and broad chemical compatibility. The membrane binds far less protein than nylon, cellulose or PES membranes. The columns fit all standard microfuges and allow you to process multiple samples in parallel.

Specifications
Membrane type: Hydrophilic PVDF
Plastic construction: Polypropylene
Pore size: 0.2 µm
Maximum sample volume: 0.65 ml
Hold-up volume: < 5 µl
Maximum g force: 16,000 g
Typical spin times: 1 - 2 mins for 0.65 ml sample at 14,000 g
Storage: Store at RT (non-sterile)
Shelf-life: 24 months

Cat.No.	Size
42225.01	100 pieces

Proteus NoEndoµ (Micro) 100 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

NoEndo™ µ spin columns incorporate our proprietary and NASA-inspired SelfSeal ™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.

Cat.No.	Size
42250.01	1 kit

Proteus NoEndoμ (Micro) 2 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

NoEndo™ μ spin columns incorporate our proprietary and NASA-inspired SelfSeal ™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.

Cat.No.	Size
42242.01	1 kit

Proteus NoEndoμ (Micro) 24 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

NoEndo™ μ spin columns incorporate our proprietary and NASA-inspired SelfSeal ™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.

Cat.No.	Size
42246.01	1 kit

Proteus NoEndoHC (High Capacity) 12 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

The proprietary FlowGo™ technology regulates sample movement through the technologically-advanced affinity resin cartridge, increasing both endotoxin removal and protein recovery. Uniquely, we offer flow rate control for endotoxin removal in a centrifuge.

Cat.No.	Size
42249.01	1 kit

Proteus NoEndoHC (High Capacity) 2 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

The proprietary FlowGo™ technology regulates sample movement through the technologically-advanced affinity resin cartridge, increasing both endotoxin removal and protein recovery. Uniquely, we offer flow rate control for endotoxin removal in a centrifuge.

Cat.No.	Size
42245.01	1 kit

Proteus NoEndoHC (High Capacity) 48 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

The proprietary FlowGo™ technology regulates sample movement through the technologically-advanced affinity resin cartridge, increasing both endotoxin removal and protein recovery. Uniquely, we offer flow rate control for endotoxin removal in a centrifuge.

Cat.No.	Size
42253.01	1 kit

Proteus NoEndoM (Mini) 12 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

NoEndo™ μ spin columns incorporate our proprietary and NASA-inspired SelfSeal ™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.

Cat.No.	Size
42247.01	1 kit

Proteus NoEndoM (Mini) 2 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

NoEndo™ µ spin columns incorporate our proprietary and NASA-inspired SelfSeal ™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.

Cat.No.	Size
42243.01	1 kit

Proteus NoEndoM (Mini) 48 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

NoEndo™ µ spin columns incorporate our proprietary and NASA-inspired SelfSeal ™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.

Cat.No.	Size
42251.01	1 kit

Proteus NoEndoS (Standard) 12 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

The proprietary FlowGo™ technology regulates sample movement through the technologically-advanced affinity resin cartridge, increasing both endotoxin removal and protein recovery. Uniquely, we offer flow rate control for endotoxin removal in a centrifuge.

Cat.No.	Size
42248.01	1 kit

Proteus NoEndoS (Standard) 2 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

The proprietary FlowGo™ technology regulates sample movement through the technologically-advanced affinity resin cartridge, increasing both endotoxin removal and protein recovery. Uniquely, we offer flow rate control for endotoxin removal in a centrifuge.

Cat.No.	Size
42244.01	1 kit

Proteus NoEndoS (Standard) 48 Column Kit

HS 38220000

Residual endotoxin contamination in advanced biotherapy products is an expensive and often difficult contaminant to control.
Many commercially available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.
The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors. These agents are increasingly being designed for therapeutic applications, hence moving them forward efficiently through *in vivo* studies requires pure preparations of the samples.

The proprietary FlowGo™ technology regulates sample movement through the technologically-advanced affinity resin cartridge, increasing both endotoxin removal and protein recovery. Uniquely, we offer flow rate control for endotoxin removal in a centrifuge.

Cat.No.	Size
42252.01	1 kit

Proteus X-Spinner 2.5 TRIAL Columns, assorted MWCOs

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl.
Trial pack contains the following X-Spinner with MWCOs of: 2x 5 kDa, 3x 10 kDa, 2x 20 kDa, 3x 100 kDa, 2x 300 kDa.

Cat.No.	Size
42226.01	12 pieces

Proteus X-Spinner 2.5, 5 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 24 X-Spinner with MWCO of 5 kDa.

Cat.No.	Size
42227.01	24 pieces

Proteus X-Spinner 2.5, 5 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 96 X-Spinner with MWCO of 5 kDa.

Cat.No.	Size
42228.01	96 pieces

Proteus X-Spinner 2.5, 10 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 24 X-Spinner with MWCO of 10 kDa.

Cat.No.	Size
42229.01	24 pieces

Proteus X-Spinner 2.5, 10 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 96 X-Spinner with MWCO of 10 kDa.

Cat.No.	Size
42230.01	96 pieces

Proteus X-Spinner 2.5, 20 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 24 X-Spinner with MWCO of 20 kDa.

Cat.No.	Size
42231.01	24 pieces

Proteus X-Spinner 2.5, 20 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 96 X-Spinner with MWCO of 20 kDa.

Cat.No.	Size
42232.01	96 pieces

Proteus X-Spinner 2.5, 100 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 24 X-Spinner with MWCO of 100 kDa.

Cat.No.	Size
42233.01	24 pieces

Proteus X-Spinner 2.5, 100 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 96 X-Spinner with MWCO of 100 kDa.

Cat.No.	Size
42234.01	96 pieces

Proteus X-Spinner 2.5, 300 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 24 X-Spinner with MWCO of 300 kDa.

Cat.No.	Size
42235.01	24 pieces

Proteus X-Spinner 2.5, 300 kDa MWCO

HS 38220000

The holy grail in ultrafiltration (UF) is to eliminate sample fouling and to enhance recovery and purity of target proteins during concentration or buffer exchange step. The 2.5 ml non-stick UF concentrator provides the highest possible protein recoveries. This is due to two factors: the low protein binding cellulose triacetate (CTA) membrane and critically, the design of the X-Spinner which ensures that ultrafiltration is in opposite direction to the centrifugal force. The contra design also ensures that the filter does not clog. This is the first centrifugal concentrator designed with membrane proteins as a key application.

Maximum sample volume is 2.5 ml, hold-up volume is 25 µl. Pack contains 96 X-Spinner with MWCO of 300 kDa.

Cat.No.	Size
42236.01	96 pieces

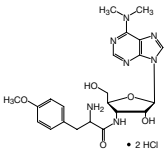
Pteroylmonoglutamic acid

see 21700 Folic acid, page 50

Puromycin·2HCl research grade

$C_{22}H_{29}N_7O_5 \cdot 2HCl$ ♦ M_r 544.4 ♦ CAS [58-58-2]

WARNING
H302-H341 ♦ EINECS 200-387-8 ♦
WGK 1 ♦ HS 29419000
Storage temperature -15 °C to -25 °C



From *Streptomyces albo-niger*. Free base (M_r 471.5) 86 %. Inhibitor of protein biosynthesis. Causes premature termination of the nascent polypeptide chain by its action as aminoacyl-tRNA analog (in procaryotes and eucaryotes).

Purity (HPLC, TLC) min. 98.0 %

References:
1. Vazquez, D. (1974) FEBS Lett. ***40,*** 63-84
2. Claeyssens, S. et al. (1993) FEBS Lett. ***315,*** 7

Cat.No.	Size
33835.01	10 mg
33835.02	50 mg
33835.03	250 mg

PVDF 0.2 Transfer Membrane

Pore size 0.2 µm, format: 30 cm x 3 m

HS 39219090

Especially for use with proteins of low molecular weight (< 20 000 Dalton). Transfer membrane based on PVDF-type chemistry with high protein binding capacity, low background and excellent mechanical stability. Applicable for all standard and special applications in the field of protein analysis.

Cat.No.	Size
42515.01	1 roll

PVDF 0.45 Transfer Membrane Pore size 0.45 µm, format: 30 cm x 3 m

HS 39219090

Transfer membrane based on PVDF-type chemistry with high protein binding capacity, low background and excellent mechanical stability. Applicable for all standard and special applications in the field of protein analysis.

Cat.No.	Size
42514.01	1 roll

3-[2-Pyridyl]-5,6-diphenyl-1,2,4-triazine-4,4´-disulfonic acid·Na-salt

see 21326 Ferrozine®, page 48

2-Pyrrolidinecarboxylic acid

see 33582 L-Proline, page 92

Pyruvic acid·Na-salt research grade, for cell culture

(Sodium pyruvate; Brenztraubensäure·Na)
$C_3H_3O_3 \cdot Na$ ♦ M_r 110.04 ♦ CAS [113-24-6]

EINECS 204-024-4 ♦ WGK 1 ♦ HS 29183000

In cell culture sodium pyruvate is used by cells as an carbohydrate source and it is involved with amino acid metabolism and initiates the Krebs cycle. E.g. it has been used as a component of M-199 medium for the maturation of oocytes and in cutting solution for rat brain tissue slice preparation.

Assay (titr.) min. 99.0 %
Heavy metals (Pb) max. 10 ppm

Cat.No.	Size
15220.01	25 g
15220.03	100 g

Quick Coomassie™ Stain

HS 38220000
Storage temperature +2 °C to +8 °C

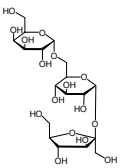
There are several benefits of our QC stain compared to other rapid and traditional Coomassie™ stains:
Rapid: 15 min non-toxic safe 1-step stain. No organic solvents and no phosphoric acid!
Sensitive: 50 x more sensitive than other rapid stains. Lower limit is 5 ng protein standard.
Linear range: Very low background enabling accurate quantitation of proteins.
High resolution: Sharp protein bands that you would expect with traditional Coomassie™ staining. Also MS compatible!
Durable: Re-usable up to 3 times!
Shelf life: 1 year at room temperature. No precipitate forms over time, thus no shaking required!

Coomassie is a trademark of ICI Ltd.

Cat.No.	Size
35081.01	1 L

α-D-Raffinose research grade

(α-D-Galactopyranosyl-(1 → 6)-α-D-glucopyranosyl-(1 → 2)-β-D-fructofuranoside)
$C_{18}H_{32}O_{16} \cdot 5H_2O$ ♦ M_r 594.56 ♦ CAS [17629-30-0]



EINECS 208-146-9 ♦ WGK 1 ♦ HS 29400000

For bacteriology.

Purity (HPLC) min. 98.0 %
MP 78 - 82 °C
[α] 20°C/D (c=10 % in water) +103.0° to +108.0 °

Cat.No.	Size
34140.02	100 g
34140.03	500 g

ReadyLyzer 0.25, MWCO 6 - 8 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 10 – 250 µl
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44620.01	10 pieces
44620.02	30 pieces

ReadyLyzer 0.25, MWCO 12 - 14 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 10 – 250 µl
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44621.01	10 pieces
44621.02	30 pieces

ReadyLyzer 0.8, MWCO 1 kDa

HS 39173200
Storage temperature +2 °C to +8 °C

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 50 – 800 µl
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44622.01	5 pieces

ReadyLyzer 0.8, MWCO 3.5 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 50 – 800 µl
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44623.01	10 pieces
44623.02	30 pieces

ReadyLyzer 0.8, MWCO 6 - 8 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 50 – 800 µl
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44624.01	10 pieces
44624.02	30 pieces

ReadyLyzer 3, MWCO 3.5 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 0.1 – 3 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44625.01	5 pieces
44625.02	15 pieces

ReadyLyzer 3, MWCO 6 - 8 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 0.1 – 3 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44626.01	5 pieces
44626.02	15 pieces

ReadyLyzer 3, MWCO 12 - 14 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 0.1 – 3 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44627.01	5 pieces
44627.02	15 pieces

ReadyLyzer 10, MWCO 1 kDa

HS 39173200
Storage temperature +2 °C to +8 °C

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 10 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44628.01	5 pieces

ReadyLyzer 10, MWCO 3.5 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 10 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44630.01	10 pieces

ReadyLyzer 10, MWCO 6 - 8 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 10 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44632.01	10 pieces

ReadyLyzer 10, MWCO 12 - 14 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 10 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44634.01	10 pieces

ReadyLyzer 20, MWCO 1 kDa

HS 39173200
Storage temperature +2 °C to +8 °C

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 20 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44629.01	5 pieces

ReadyLyzer 20, MWCO 3.5 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 20 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44631.01	10 pieces

ReadyLyzer 20, MWCO 6 - 8 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 20 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44633.01	10 pieces

ReadyLyzer 20, MWCO 12 - 14 kDa

HS 39173200

Ready-to-use dialysis system for quick and efficient dialysis and buffer exchange. The tube has the dialysis membrane pre-installed and is easily opened and closed with a screw cap. No struggling with closures and leaking knots or risking puncturing the membrane. Delivered with a flotation ring for improved buoyancy and vertical orientation.

- Volume size: 20 ml
- High recovery 98 %
- Ultrapure regenerated cellulose membrane

Cat.No.	Size
44635.01	10 pieces

Recombinant Protein A Sepharose FF Resin

HS 38220000

Protein A Sepharose® FF Resin designed for simple, one-step and rapid antibody purification from serum, ascites and tissue culture supernatant such as those derived from static cultures and bioreactors.
Recombinant protein A has been coupled to Sepharose® to obtain a stable matrix with a high binding capacity for immunoglobulins via the heavy chain of the FC region (up to 30 mg/ml Human IgG). Antibody samples purified using this affinity resin may be used in a wide range of laboratory procedures such as 1D or 2D polyacrylamide gel electrophoresis, Western blotting, ELISA etc. Binding affinity varies depending upon the source species and subclass.

Specifications
Specificity: Protein A affinity antibodies
Matrix: Sepharose®
Coupled ligand: 3.5 mg Protein A/ml resin
Binding capacity (human IgG): 30 mg/ml
Bead size: 60 - 165 µm
Flow rate: 0.25 - 1 ml/min (recommended)
Maximum pressure: 120 - 140 psi
Buffer compatibility: Common aqueous buffers from pH 2.5 - 10
Binding buffer example: 1.5 M glycine/NaOH, 3 M NaCl pH 9.0
Elution buffer example (1): 0.1 M sodium citrate pH 5.5
Elution buffer example (2): 0.2 M glycine/HCl pH 2.5
Neutralization buffer example: 1 M Tris/HCl pH 9.0
Shipping/delivery: 50 % (v/v) resin suspension in 0.01 % thimerosal
Storage: 0.01 % thimerosal at 2 - 8 °C for up to 2 years from manufacture

Cat.No.	Size
42309.01	1 ml

Recombinant Protein A Sepharose FF Resin

HS 38220000

Protein A Sepharose® FF Resin designed for simple, one-step and rapid antibody purification from serum, ascites and tissue culture supernatant such as those derived from static cultures and bioreactors.
Recombinant protein A has been coupled to Sepharose® to obtain a stable matrix with a high binding capacity for immunoglobulins via the heavy chain of the FC region (up to 30 mg/ml Human IgG). Antibody samples purified using this affinity resin may be used in a wide range of laboratory procedures such as 1D or 2D polyacrylamide gel electrophoresis, Western Blotting, ELISA etc. Binding affinity varies depending upon the source species and subclass.

Specifications
Specificity: Protein A affinity antibodies
Matrix: Sepharose®
Coupled ligand: 3.5 mg Protein A/ml resin
Binding capacity (human IgG): 30 mg/ml
Bead size: 60 - 165 µm
Flow rate: 0.25 - 1 ml/min (recommended)
Maximum pressure: 120 - 140 psi
Buffer compatibility: Common aqueous buffers from pH 2.5 - 10
Binding buffer example: 1.5 M glycine/NaOH, 3 M NaCl pH 9.0
Elution buffer example (1): 0.1 M sodium citrate pH 5.5
Elution buffer example (2): 0.2 M glycine/HCl pH 2.5
Neutralization buffer example: 1 M Tris/HCl pH 9.0
Shipping/delivery: 50 % (v/v) resin suspension in 0.01 % thimerosal
Storage: 0.01 % thimerosal at 2 - 8 °C for up to 2 years from manufacture

Cat.No.	Size
42310.01	5 ml

Recombinant Protein A Sepharose FF Resin

HS 38220000

Protein A Sepharose® FF Resin designed for simple, one-step and rapid antibody purification from serum, ascites and tissue culture supernatant such as those derived from static cultures and bioreactors.
Recombinant protein A has been coupled to Sepharose® to obtain a stable matrix with a high binding capacity for immunoglobulins via the heavy chain of the FC region (up to 30 mg/ml Human IgG). Antibody samples purified using this affinity resin may be used in a wide range of laboratory procedures such as 1D or 2D polyacrylamide gel electrophoresis, Western Blotting, ELISA etc. Binding affinity varies depending upon the source species and subclass.

Specifications
Specificity: Protein A affinity antibodies
Matrix: Sepharose®
Coupled ligand: 3.5 mg Protein A/ml resin
Binding capacity (human IgG): 30 mg/ml
Bead size: 60 - 165 µm
Flow rate: 0.25 - 1 ml/min (recommended)
Maximum pressure: 120 - 140 psi
Buffer compatibility: Common aqueous buffers from pH 2.5 - 10
Binding buffer example: 1.5 M glycine/NaOH, 3 M NaCl pH 9.0
Elution buffer example (1): 0.1 M sodium citrate pH 5.5
Elution buffer example (2): 0.2 M glycine/HCl pH 2.5
Neutralization buffer example: 1 M Tris/HCl pH 9.0
Shipping/delivery: 50 % (v/v) resin suspension in 0.01 % thimerosal
Storage: 0.01 % thimerosal at 2 - 8 °C for up to 2 years from manufacture

Cat.No.	Size
42311.01	25 ml

Recombinant Protein G Sepharose FF Resin

HS 38220000

Protein G Sepharose® FF Resin designed for simple, one-step and rapid antibody purification from serum, ascites and tissue culture supernatant such as those derived from static cultures and bioreactors.
Recombinant protein G has been coupled to Sepharose® to obtain a stable matrix with a high binding capacity for immunoglobulins via the heavy chain of the FC region (up to 20 mg/ml Human IgG). Antibody samples purified using this affinity resin may be used in a wide range of laboratory procedures such as 1D or 2D polyacrylamide gel electrophoresis, Western Blotting, ELISA etc. Binding affinity varies depending upon the source species and subclass.

Specifications
Specificity: Protein G affinity antibodies
Matrix: Sepharose®
Coupled ligand: 2 mg Protein G/ml resin
Binding capacity (human IgG): 20 mg/ml
Bead size: 45 - 165 µm
Flow rate: 0.25 - 1 ml/min (recommended)
Maximum pressure: 120 - 140 psi
Buffer compatibility: Common aqueous buffers from pH 2.5 - 10
Binding buffer example: 0.1 M sodium phosphate, 0.15 M NaCl, pH 7.4
Elution buffer example: 0.2 M glycine/HCl pH 2.5
Neutralization buffer example: 1 M Tris/HCl pH 9.0
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol
Storage: 20 % ethanol at 2 - 8 °C for up to 2 years from manufacture

Cat.No.	Size
42312.01	1 ml

Recombinant Protein G Sepharose FF Resin

HS 38220000

Protein G Sepharose® FF Resin designed for simple, one-step and rapid antibody purification from serum, ascites and tissue culture supernatant such as those derived from static cultures and bioreactors.
Recombinant protein G has been coupled to Sepharose® to obtain a stable matrix with a high binding capacity for immunoglobulins via the heavy chain of the FC region (up to 20 mg/ml Human IgG). Antibody samples purified using this affinity resin may be used in a wide range of laboratory procedures such as 1D or 2D polyacrylamide gel electrophoresis, Western Blotting, ELISA etc. Binding affinity varies depending upon the source species and subclass.

Specifications
Specificity: Protein G affinity antibodies
Matrix: Sepharose®
Coupled ligand: 2 mg Protein G/ml resin
Binding capacity (human IgG): 20 mg/ml
Bead size: 45 - 165 µm
Flow rate: 0.25 - 1 ml/min (recommended)
Maximum pressure: 120 - 140 psi
Buffer compatibility: Common aqueous buffers from pH 2.5 - 10
Binding buffer example: 0.1 M sodium phosphate, 0.15 M NaCl, pH 7.4
Elution buffer example: 0.2 M glycine/HCl pH 2.5
Neutralization buffer example: 1 M Tris/HCl pH 9.0
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol
Storage: 20 % ethanol at 2 - 8 °C for up to 2 years from manufacture

Cat.No.	Size
42313.01	5 ml

Recombinant Protein G Sepharose FF Resin

HS 38220000

Protein G Sepharose® FF Resin designed for simple, one-step and rapid antibody purification from serum, ascites and tissue culture supernatant such as those derived from static cultures and bioreactors.
Recombinant protein G has been coupled to Sepharose® to obtain a stable matrix with a high binding capacity for immunoglobulins via the heavy chain of the FC region (up to 20 mg/ml Human IgG). Antibody samples purified using this affinity resin may be used in a wide range of laboratory procedures such as 1D or 2D polyacrylamide gel electrophoresis, Western Blotting, ELISA etc. Binding affinity varies depending upon the source species and subclass.

Specifications
Specificity: Protein G affinity antibodies
Matrix: Sepharose®
Coupled ligand: 2 mg Protein G/ml resin
Binding capacity (human IgG): 20 mg/ml
Bead size: 45 - 165 µm
Flow rate: 0.25 - 1 ml/min (recommended)
Maximum pressure: 120 - 140 psi
Buffer compatibility: Common aqueous buffers from pH 2.5 - 10
Binding buffer example: 0.1 M sodium phosphate, 0.15 M NaCl, pH 7.4
Elution buffer example: 0.2 M glycine/HCl pH 2.5
Neutralization buffer example: 1 M Tris/HCl pH 9.0
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol
Storage: 20 % ethanol at 2 - 8 °C for up to 2 years from manufacture

Cat.No.	Size
42314.01	25 ml

Rehydration Tray for IPG Strips

HS 90272000

To rehydrate up to 12 IPG strips in lengths up to 24 cm. The rehydration tray is form stable and resistant against chemicals normally used when rehydrating IPG strips. The binding capacity to proteins is very low. The lid protects the IPG strips during rehydration against contamination. After usage the tray can easily be cleaned using a mild washing-up liquid and rinsed with distilled water.

Cat.No.	Size
43091.01	1 piece

Renlam® M-1

(ARALDITE® CY 212)

WARNING
H315-H317-H319-H411 ♦ GGVSE/ADR 9 III UN3082 ♦ IATA 9 III UN3082 ♦ WGK 2 ♦ HS 29109000

Solvent-free, modified bisphenol A epoxy resin. Epoxy equivalent weight 232-250. Yields 3-dimensional crosslinking blocks.
Non-toxic substitute for ARALDITE® CY 212, which contained dibutyl phthalate. Renlam® M-1 has identical properties as ARALDITE® CY 212 and can therefore be used in all electron microscopy protocols in exactly the same way as ARALDITE® CY 212.

Viscosity	1400 - 1800 mPa·s/25 °C
Epoxy number	4.10 - 4.35 eq./kg

Renlam+ ARALDITE = trademarks of Huntsman Advanced Materials Europe

Cat.No.	Size
13825.02	1 kg

Replacement Bulb 8 W, 254 NM

HS 90278017

Cat.No.	Size
UV-8-254.01	1 pieces
UV-8-254.02	8 pieces

Replacement Bulb 8 W, 312 NM

HS 90278017

Cat.No.	Size
UV-8-312	1 piece

Replacement Electrode for BM-100 (one pair)

HS 90279050

Cat.No.	Size	EUR
BM-100-RE	1 piece	285,00

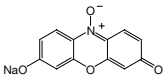
Replacement Electrode for BM-200 (one pair)

HS 90279050

Cat.No.	Size
BM-200-RE	1 piece

Resazurin·Na-salt analytical grade

(Diazoresorcinol)
$C_{12}H_6NO_4$·Na ♦ M_r 251.2 ♦ CAS [62758-13-8]



WARNING
H302-H315-H319-H335 ♦ EINECS 263-718-5 ♦ HS 29349990

Resazurin is a blue non-fluorescent dye used as a redox indicator in cell viability and proliferation assays for bacteria, yeast or mammalian cells. In viable cells the blue form of the dye is irreversibly reduced by enzymes to the highly red-fluorescent product resorufin (excitation: 530 - 540 nm; emission: 585 - 595 nm), which can be detected by flow cytometry, fluorescence microscopy, and high-throughput screening methods. Resazurin is minimally toxic to living cells, making it suitable for use in long-term cell culture.

Cat.No.	Size
34226.02	5 g

Resazurin Cell Viability Assay

HS 38220000
Storage temperature -15 °C to -25 °C

The Resazurin Cell Viability Assay is a fluorescent assay that detects the cellular metabolic activities. The kit offers a simple, rapid, reliable, sensitive, safe, and cost-effective measurement of cell viability. Resazurin is a blue non-fluorescent dye until it is irreversibly reduced to the pink colored, highly red fluorescent resorufin by dehydrogenase enzymes in metabolically active cells. The fluorescent signal is monitored using 530 – 560 nm exication wavelength and 590 nm emission wavelength. The absorbance is monitored at 570 nm and 600 nm. The fluorescent or colorimetric signal generated is proportional to the number of living cells in the sample.

Cat.No.	Size
39905.01	4x 2,500 react.

Ribonuclease A from bovine pancreas min. 80 Kunitz units/mg lyophil.

(Pancreatic RNase; ribonuclease I; ribonucleate 3-pyrimidino-oligonucleotidohydrolase)
EC 3.1.27.5 ♦ M_r ca. 13 700 ♦ CAS [9001-99-4]

DANGER
H334 ♦ EINECS 232-646-6 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

An endonuclease which specifically attacks pyrimidine sites (Py/pN) at the 3'-phosphate group. This preparation is salt-free, protease-free and chromatographically homogeneous.
RNase A content: min. 90 % by ion exchange chromatography. DNase not detected.

Unit definition: 1 unit is that amount of activity which is capable of causing within 1 minute a decrease in absorbance at 300 nm equivalent to the maximum possible change in a 0.05 % solution of yeast RNA at 25 °C, pH 5.0

References:

1. Kunitz, M. (1946) J. Biol. Chem. ***164,*** 563-8
2. Krupp, G. & Gross, H.J. (1979) Nucl. Acids Res. ***6,*** 3481-90
3. Levy, C.C. & Kaepetzky, T.P. (1980) J. Biol. Chem. ***255,*** 2153-9
4. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (5.81)
5. Ed. Ausubel et al. (1994) Current Protocols in Molecular Biology, Massachusetts General Hospital & Harvard Medical School (3.13.1, 5.5.2, 4.7.3, 7.3.8)

Cat.No.	Size
34388.01	50 mg
34388.02	250 mg

Ribonuclease A from bovine pancreas min. 70 Kunitz units/mg lyophil.

EC 3.1.27.5 ♦ M_r ca. 13 700 ♦ CAS [9001-99-4]

DANGER
H334 ♦ EINECS 232-646-6 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

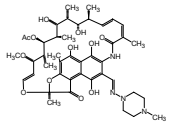
RNase A content approx. 70 %.
DNase-free RNase: To prepare RNase A free of DNase dissolve RNase A in TE buffer at 1 mg/ml and boil 10 to 30 minutes. Store aliquots at -20 °C to prevent microbial growth.

Unit definition: 1 unit is that amount of activity which is capable of causing within 1 minute a decrease in absorbance at 300 nm equivalent to the maximum possible change in a 0.05 % solution of yeast RNA at 25 °C, pH 5.0.

Cat.No.	Size
34390.02	100 mg
34390.03	1 g

Rifampicin research grade

(Rifampin „Lepetit"; Rifamycin-AMP)
$C_{43}H_{58}N_4O_{12}$ ♦ M_r 822.96 ♦ CAS [13292-46-1]



WARNING
H302-H332 ♦ EINECS 236-312-0 ♦ WGK 1 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Semisynthetic derivative of rifamycin SV which is produced from certain strains of *Amycolatopsis mediterranei*. Belongs to the group of ansamycin antibiotics. Inhibitor of DNA-dependent RNA-polymerase. Specifically inhibits the initiation step of RNA synthesis.

Assay 98.0 - 102.0 %

References:
1. Meilhac, M. et al. (1972) Eur. J. Biochem. ***28,*** 291-300
2. Ohta, S. et al. (1990) . Plant Cell Physiol. ***31,*** 805-13
3. Dreher, J. et al. (1991), Molecular Microbiology, ***5*** (12), 3025-3034
4. Vilchez, S. et al. (2000) J. Bacteriol. ***182***, 91-9
5. Schwalb, C. et al. (2003) Biochemistry ***42***, 9491-7
6. Freiberg, C. et al. (2004) Current Opinion in Microbiology ***7***, 451-9

Cat.No.	Size
34514.01	1 g
34514.02	5 g

RIPA Buffer

HS 38220000
Storage temperature +2 °C to +8 °C

RIPA buffer is a very effective buffer for lysis of cultured mammalians cells. It enables protein extraction from cytoplasmic, membrane and nuclear proteins. The buffer is compatible with many applications like protein purification, protein assays, Western blotting, reporter assays etc. However, it will disrupt protein-protein interactions and may therefore disturb applications like immunoprecipitation and pull-down assays.

Cat.No.	Size
39244.01	100 ml
39244.02	500 ml

Roller for Electrophoresis

HS 90330000

Cat.No.	Size
42991.01	1 piece

Salt Active Nuclease

HS 35079090
Storage temperature -15 °C to -25 °C ✻✻

Supplied as solution in 25 mM Tris-HCl pH 7.5, 5 mM $MgCl_2$, 0.5 M NaCl, 0.01 % Triton® X-100, 50 % (v/v) glycerol.
Salt Active Nuclease is a highly active non-specific endonuclease from a marine bacterium that cleaves both DNA and RNA. It digests DNA versus RNA in a 10:1 ratio.
Salt Active Nuclease has optimum activity at 0.5 M NaCl, is active in the pH range of 7 to 10 and low temperatures, which makes the enzyme ideal for use in removal of nucleic acids from cell extracts and proteins samples. It will remove contaminating nucleic acids in a traditional protein buffer system. That guarantees the full protection of proteins while the nucleic acids are fully removed.

- Non-specific endonuclease
- Optimum activity at high salt concentration (0.5 M NaCl)
- Active at low temperatures (20 % at 6 °C)
- Broad pH range
- Easily inactivated by reducing agents

pH optimum	pH 9
Salt optimum	0.5 M NaCl

Unit definition: One unit is defined as an increase in absorbance at 260 nm of 0.001 per minute at 37 °C, using 50 µg/ml calf thymus DNA in a buffer consisting of 25 mM Tris-HCl, pH 8.5 (25 °C), 5 mM $MgCl_2$, 500 mM NaCl.

Cat.No.	Size
18541.01	5.000 U

Sample Application Pieces 10 x 5 mm

HS 48232000

For application of samples on the surface of IEF gels. The sample application pieces are placed on the gel surface at the optimal pH location.

Cat.No.	Size
42880.01	200 pieces

Sample Buffer for Blue Native (2x)

HS 38220000
Storage temperature -15 °C to -25 °C

Sample buffer for Blue Native PAGE. Supplied as 2x concentrate. Contains 1 M 6-aminocaproic acid, 100 mM BisTris-HCl (pH 7.0), 100 mM NaCl, 20 % glycerol, 0.1 % SERVA Blue G.

Cat.No.	Size
42533.01	20 ml

Sample Buffer for Clear Native (2x)

HS 38220000
Storage temperature -15 °C to -25 °C

Sample buffer for Clear Native PAGE. Supplied as 2x concentrate. Contains 100 mM NaCl, 100 mM imidazole, 4 mM 6-aminocaproic acid, 2 mM EDTA, 0.02 % Ponceau S, 20 % glycerol.

Cat.No.	Size
42534.01	20 ml

Saponin pure, DAB

CAS [8047-15-2]

WARNING
H315-H319-H335 ♦ EINECS 232-462-6 ♦ WGK 2L ♦ HS 29389090

Isolated from *Quillaja bark*. For permeabilization of cells.

References:
1. Lupetina, E.G. et al. (1984) Proc. Natl. Acad. Sci. USA ***81,*** 7431

Cat.No.	Size
34655.01	50 g
34655.02	250 g

Sarkosyl NL-30

see 27570 N-Lauroylsarcosine·Na-salt, page 71

Schneider's Drosophila Powder Medium Revised

HS 38210000
Storage temperature +2 °C to +8 °C

Without sodium bicarbonate, **without** calcium chloride.

Supplements:
Penicillin G·K-salt (cat. no. 31749) 50 U/ml
Streptomycin sulfate 0.1 mg/ml
(cat. no. 35500)

References:
1. Schneider, I. (1964) J. Exp. Zool. ***156,*** 91-104 and 166

Cat.No.	Size
47521.04	10 L

SDS

see 20760 Dodecylsulfate·Na-salt, page 44

SDS Gel Kit 10 % 25S Size: 250 x 125 x 0.45 mm

HS 38220000

Kit for horizontal SDS polyacrylamide gel electrophoresis.
Contains 4 film-backed 10 % T precast SDS PAGE gels
(size 250 x 125 x 0.45 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit.
For the run on horizontal flatbed systems like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43359.01	1 kit

SDS Gel Kit 10 % 52S Size: 250 x 125 x 0.45 mm

HS 38220000

Kit for horizontal SDS polyacrylamide gel electrophoresis.
Contains 4 film-backed 10 % T precast SDS PAGE gels
(size 250 x 125 x 0.45 mm, 52 slots for 6 µl) and a SDS PAGE buffer kit.
For the run on horizontal flatbed systems like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43360.01	1 kit

SDS Gel Kit 15 % 25S Size: 250 x 125 x 0.45 mm

HS 38220000

Kit for horizontal SDS polyacrylamide gel electrophoresis.
Contains 4 film-backed 15 % T precast SDS PAGE gels
(size 250 x 125 x 0.45 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit.
For the run on horizontal flatbed systems like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43361.01	1 kit

SDS Gel Kit 15 % 52S Size: 250 x 125 x 0.45 mm

HS 38220000

Kit for horizontal SDS polyacrylamide gel electrophoresis.
Contains 4 film-backed 15 % T precast SDS PAGE gels
(size 250 x 125 x 0.45 mm, 52 slots for 6 µl) and a SDS PAGE buffer kit.
For the run on horizontal flatbed systems like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43362.01	1 kit

SDS Gel Kit NF 12.5 % 25S Size: 250 x 125 x 0.45 mm

HS 38220000

Ready-to-use gel kit for 1-dimensional DIGE samples and all other fluorescent visualizations. Contains 4 film-backed 12.5 % T precast SDS PAGE gels (size 250 x 125 x 0.45 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit. On non-fluorescent film support for HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43363.01	1 kit

SDS Gel Kit NF 15 % 25S Size: 250 x 125 x 0.45 mm

HS 38220000

Ready-to-use gel kit for 1-dimensional DIGE samples and all other fluorescent visualizations. Contains 4 film-backed 15 % T precast SDS PAGE gels (size 250 x 125 x 0.45 mm, 25 slots for 6 µl) and a SDS PAGE buffer kit. On non-fluorescent film support for HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43364.01	1 kit

1D SDS NetGel NF 12.5% 25S Kit Size: 250 x 125 x 0.45 mm

HS 38220000

Kit for horizontal SDS polyacrylamide gel electrophoresis and subsequent semi-dry blotting.

Contains 4 film-backed, net-reinforced 12.5 % T precast SDS PAGE gels (size 250 x 125 x 0.45 mm, 25 slots for 15 µl) and a SDS PAGE buffer kit.

The gels are non-covalently bound to the carrier film so that it can be easily removed from the gel after electrophoresis for blotting. In addition, the gel matrix is mechanically stabilized by a reinforcing net structure (Net-Fix™) to avoid damage of the gel.

The backing film is non-fluorescent for 1 D DIGE samples and all other fluorescent applications. For the run on horizontal flatbed systems like HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.
.

Cat.No.	Size
43500.01	1 kit

SDS pellets

see 20765 Dodecylsulfate·Na-salt in Pellets, page 41

SDS Solution, 20 %

WARNING
H315-H319-H335 ♦ WGK 2 ♦ HS 38220000

For use in biochemical, electrophoretical and molecular biology applications.
Composition:
SDS: 200 g/L

Cat.No.	Size
20767.01	100 ml
20767.02	500 ml
20767.03	1 L

SDS Solution, 20 % molecular biology grade

WARNING
H315-H319-H335 ♦ WGK 2 ♦ HS 38220000

DNase/RNase not detected. For molecular biology applications.

Composition:
SDS: 200 g/L

Cat.No.	Size
39575.01	100 ml
39575.02	1 L

SDS Solution, 20 % electrophoresis grade

WARNING
H315-H319-H335 ♦ HS 38220000

Ultrapure SDS solution, suitable for standard and high resolution electrophoresis techniques.

Composition:
SDS: 200 g/L

Cat.No.	Size
20768.01	100 ml
20768.02	500 ml
20768.03	1 L

SDS Urine Gel Kit 25S Size: 250 x 125 x 0.45 mm

HS 38220000
Storage temperature +2 °C to +8 °C

Ready-to-use kit for analysis of urine proteins by SDS polyacrylamide gel electrophoresis: 25 slots for 15 µl, 4 gels + buffer kit suitable for urine protein analysis; for HPE™ BlueTower, HPE™ BlueHorizon and Multiphor II™.

Cat.No.	Size
43391.01	1 kit

Sealing Strips for Xpress Micro Dialyzer

The sealing foils for the Micro Dialyzer consist of high-quality PP and protect the sample against contamination and evaporation.

Cat.No.	Size
46140.01	12 strips

L-Seleno-Methionine

$C_5H_{11}NO_2Se$ ♦ M_r 196.1 ♦ CAS [3211-76-5]

DANGER
H301-H331-H373-H400-H410 ♦ EG-Index 034-002-00-8 ♦ GGVSE/ADR 6.1 II UN3283 ♦ IATA 6.1 II UN3283 ♦ WGK 3 ♦ HS 29310099

Antioxidant agent. Induces apoptosis. Shows antiproliferative effects (IC50 = 45 - 130 µM). By induction of glutathione peroxidase it mitigates the effects of oxidative stress.

Assay	min. 99.0 %
Selenium	39.0 - 41.0 %

Cat.No.	Size
77765.02	100 mg
77765.01	500 mg

Semi-Dry Blotting Buffer Kit for Western Blotting

DANGER
H370 ♦ WGK 1 ♦ HS 38220000

For Western Blotting in the „Semi-Dry" System. Ready-to-use kit, consisting of 3 components:
Buffer I (conc. anode buffer): 0.3 M Tris and 20 % methanol in aqueous solution.
Buffer II (diluted anode buffer): 0.03 M Tris and 20 % methanol in aqueous solution.
Buffer III (cathode buffer): 0.025 M Tris/HCl (pH 9.4), 0.04 M 6-aminocaproic acid and 20 % methanol in aqueous solution.

Cat.No.	Size
42559.01	3 x 500 ml

SERDOLIT® Chelite® P analytical grade

HS 39140000

Off-white beads with a macroporous resin structure and a general affinity for polyvalent metal cations which may be employed for special techniques (e.g. $^{90}Sr^{++}$ determination).
Styrene-DVB matrix with aminomethylphosphonic acid groups. Sodium form. The total capacity, expressed in g Cu/l is 45. Maximum working temperature: 65 °C. Complete desorption can be effected by 5 volumes of 2 N HCl.

Capacity	min. 1.1 eq/l
Particle size	20 - 50 mesh (0.3 - 0.8 mm)
Loss on drying	60 - 70 %

Cat.No.	Size
41706.01	250 g
41706.02	1 kg

SERDOLIT® MB analytical grade

HS 39140000

Mixed-bed ion exchanger with exhaustion indicator composed of SERDOLIT® Blue (OH^--form) and SERDOLIT® CS-2 (H^+-form) in a ratio at approx. 1.5:1 (v/v); ready-to-use, suitable for demineralizing water.

Capacity	min. 0.8 eq/l
Particle size	16 - 50 mesh (0.3 - 1.2 mm)
Loss on drying	50 - 65 %

Cat.No.	Size
45500.03	500 g
45500.02	1 kg

SERDOLIT® MB-1 analytical grade

HS 39140000

Mixed-bed ion exchanger composed of a strongly acidic cation exchanger and a strongly basic anion exchanger (type I) in a ratio of 1:1.5 (v/v).

Capacity	min. 1.0 eq/l
Particle size	16 - 50 mesh (0.3 - 1.2 mm)
Loss on drying	55 - 65 %

Cat.No.	Size
40701.03	500 g
40701.02	1 kg

SERDOLIT® MB-2 analytical grade

HS 39140000

Mixed-bed ion exchanger similar to SERDOLIT® MB-1 but with a type II basic anion exchanger.

Capacity	min. 0.8 eq/l
Particle size	16 - 50 mesh (0.3 - 1.2 mm)
Loss on drying	50 - 60 %

Cat.No.	Size
40711.03	500 g
40711.02	1 kg

SERDOLIT® PAD I, 0.1 - 0.2 mm analytical grade

(Ion Exchange Media)
HS 39140000

Apolar polystyrene/DVB matrix, macroporous.

Particle Size	0.1 - 0.2 mm
Spec. surface	min. 250 m^2/g
Pore Size	ca. 25 nm
Loss on Drying	40 - 50 %

Cat.No.	Size
42443.01	100 g

SERDOLIT® PAD I, 0.3 - 1.0 mm analytical grade

HS 39140000

Apolar polystyrene/DVB matrix, macroporous. Recommended as alternative product to replace AMBERLITE® XAD-2.

Particle size	0.3 - 1.0 mm
Spec. surface	min. 250 m^2/g
Pore size	ca. 25 nm
Loss on drying	40 - 50 %

Cat.No.	Size
42442.01	100 g

SERDOLIT® PAD II, 0.1 - 0.2 mm analytical grade

HS 39140000

Apolar polystyrene/DVB matrix, macroporous. Larger surface than SERDOLIT® PAD I.

Particle size	0.1 - 0.2 mm
Spec. surface	min. 400 m^2/g
Pore size	ca. 25 nm
Loss on drying	40 - 50 %

Cat.No.	Size
42446.01	100 g

SERDOLIT® PAD II, 0.3 - 1.0 mm analytical grade

HS 39140000

Apolar polystyrene/DVB matrix, macroporous. Larger surface area than SERDOLIT® PAD I.

Particle size	0.3 - 1.0 mm
Spec. surface	min. 400 m^2/g
Pore size	ca. 25 nm
Loss on drying	30 - 40 %

Cat.No.	Size
42445.01	100 g

SERDOLIT® PAD III, 0.1 - 0.2 mm analytical grade

HS 39140000

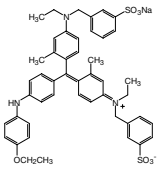
Apolar polystyrene/DVB matrix, macroporous. Extremely large specific surface resulting in high adsorption capacity and kinetics.

Particle size	0.1 - 0.2 mm
Spec. surface	min. 800 m^2/g
Pore size	ca. 25 nm
Loss on drying	45.0 - 55.0 %

Cat.No.	Size
42449.01	100 g

SERVA Blue G

(Acid Blue 90; COOMASSIE® Brilliant Blue G-250; Xylene Brilliant Cyanine G)
C.I.42655 ♦ $C_{47}H_{48}N_3O_7S_2$·Na ♦ M_r 854.0 ♦
CAS [6104-58-1]



EINECS 228-058-4 ♦ WGK 2L ♦ HS 32041200

For preparation of staining solution for protein detection in gel electrophoresis.

λ max. (0.001 % pH 7)	580 - 590 nm
A 1 cm/λ max./1 % pH 7	min. 450

COOMASSIE= TM of ICI Ltd.

Cat.No.	Size
35050.01	5 g
35050.02	25 g
35050.03	100 g

SERVA Blue G Solution for Blue Native, 1%

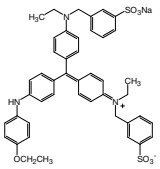
HS 38220000

Solution for preparing the blue stained cathode running buffer for Blue Native gel electrophoresis.
SERVA Blue G (cat. no. 35050): 10 g/l in aqua dest.

Cat.No.	Size
42538.01	20 ml

SERVA Blue R

(Acid Blue 83; COOMASSIE® Brilliant Blue R-250)
C.I.42660 ♦ $C_{45}H_{44}N_3O_7S_2$·Na ♦ M_r 826.0 ♦
CAS [6104-59-2]



EINECS 228-060-5 ♦ WGK 2L ♦ HS 32041200

For preparation of staining solution for protein detection in gel electrophoresis. R stands for „reddish“.

λ max. (0.0002 % pH 7)	558 - 562 nm
A 1 cm/λ max./0.0002 % pH 7	min. 0.06
ϵλmax pH 7	min. 25 000

COOMASSIE= TM of ICI Ltd.

Cat.No.	Size
35051.01	5 g
35051.02	25 g
35051.03	100 g

SERVA Blue R Staining Kit

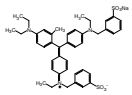
DANGER
H225-H314 ♦ WGK 1 ♦ HS 38220000

Contains 500 ml 0.2 % SERVA Blue R in ethanol and 500 ml 20 % acetic acid.

Cat.No.	Size
42531.01	1 kit

SERVA Blue W soluble in water

(Acid Blue 15)
C.I.42645 ♦ $C_{42}H_{46}N_3O_6S_2$·Na ♦ M_r 776.0 ♦
CAS [5863-46-7]



EINECS 227-511-3 ♦ WGK 2L ♦ HS 32041200

A triphenylmethane dye, more lipophilic methyl homologue of SERVA Violet R. Suitable for round gels of PAGE, also for flat gels 0.1 - 1.0 mm thick.

λ max. (0.001 % pH 7)	566 - 564 nm
A 1 cm/λmax./0.001 % pH 7	min. 0.5

Cat.No.	Size
35053.02	25 g
35053.03	100 g

SERVA BlueCube 300

HS 90275000

The SERVA BlueCube 300 is a small and compact documentation system for capturing SERVA DNA Stain Clear G and EtBr stained nuclei acids separated in agarose and acrylamide gels.
The BlueCube is a compact instrument of 30 cm (W) x 26 cm (D) x 23,5 (H) cm and a weight of 10.4 kg, only.
It is equipped with a CMOS sensor, a two-filter system, a UV filter (∅ 25 mm) and a UV table drawer (312 nm, filter size is 180 x 140 mm).
A magnetic protection shield for safe handling of the gel (e.g. when cutting out gel bands) is included as well.
An external computer (only included with „L“-version) is connected via USB. A gel capture and 1D analysis software comes with the system for fast and easy going analysis of the captured gel, including automatic band detection, determination of molecular weights and quantification of bands.

Cat.No.	Size
BC-300	1 piece

SERVA BlueCube 300L

HS 90275000

The SERVA BlueCube 300L is a small and compact documentation system for capturing SERVA DNA Stain Clear G and EtBr stained nuclei acids separated in agarose and acrylamide gels.
The BlueCube is a compact instrument of 30 cm (W) x 26 cm (D) x 23,5 cm (H) and a weight of 10.4 kg, only. It is equipped with a CMOS sensor, a two-filter system, a UV filter (∅ 25 mm) and a UV table drawer (312 nm, filter size is 180 x 140 mm).
A magnetic protection shield for safe handling of the gel (e.g. when cutting out gel bands) is included as well. An external computer (included with „L“-version) is connected via USB. A gel capture and 1D analysis software comes with the system for fast and easy going analysis of the captured gel, including automatic band detection, determination of molecular weights and quantification of bands.

Cat.No.	Size
BC-300L	1 piece

SERVA BlueForceps

HS 90272000

Specially shaped foreceps for easy handling of gels and membranes.

Cat.No.	Size
SBF-01	1 piece

SERVA BlueImager

HS 90275000

The SERVA BlueImager is a compact gel documentation system with user-friendly features of easy operation and quick response when in WiFi environment under standalone condition. This imaging system consists of a scientific CCD camera, motor driven lens, RGB light illuminator. The five-fold filter changer is equipped with a 595 nm filter.
Fluorescent stains such as SERVA Lightning Red, SERVA Lightning Sci3 and Cy3 are detectable with the standard emission filter.
In addition and by the use of additional filters (additional filters like 535 nm and 665 nm are available) SERVA Lightning Sci2, SERVA Lightning Sci5, Cy2, Cy5, Alexa 488, Alexa 546, Alexa 647, SYPRO Ruby, SYBR Green I/ II, SYBR Safe, DNA Stain G, etc. excited by blue, red, and green lights can easily be observed and captured by BlueImager.
Followed the design concept of a single, independent workstation with a single all-in-one processor embedded inside, BlueImager does not require any extra desktop computer to operate the system on. The 8" built-in touch screen LCD panel that BlueImager possesses can directly handle the image data without difficulty. Moreover, the BlueImager's smart user interface and vivid icons can rapidly capture gel images with high accuracy. With the use of BlueImager, you will enjoy a worry-free experience in collecting the gel imaging data while conducting some advanced chemi-fluorescence staining related experiments in your research.

Features:

- Wide applications for colorimetric and fluorescence detection
- Patent-registered light source design: effectively excite the dye on gel sample
- High sensitivity: detection limit may reach to 1 ng
- Highly efficient filter lens suitable for the emission wavelength excited from each light source
- Ready for DIGE, multiplex analysis
- Low energy consumption: Energy saving
- Cost efficient: affordable imager system that may process some advanced research experiments

Applications:
The three light sources equipped in BlueImager are red, green, and blue LED lights. Thus, wide range of color fluorescence applications may be processed through light source excitations:

- Red light applications: SERVA Lightning Sci5, Alexa™ 647, Alexa™ 660, allophycocyanin, Cy5, TO-PRO™-3, etc….
- Green light applications: SERVA Lightning Sci3, Alexa™ 546, Alexa™ 555, Alexa™ 568, Cy3, Nile red, Rhodamine B, TRITC, etc….
- Blue light applications: : SERVA Lightning Sci2, Alexa™ 488, Cy2, SYBR Safe, SYBR Green, SYBR Gold, SYPRO Ruby, FITC, ethidium bromide, etc.

Cat.No.	Size
BI-RGB	1 piece

SERVA Blue-White Light Table

HS 90275000

The Blue/White Light Table is a dual light source transilluminator for bottom-up LED illumination. It is adjustable to 3 individual light intensities, the amber filter is hinge-free, magnetic positioned. A gel cutting knife as well as a cardboard hood for image capturing with a smartphone are included.

- Filter size 180 mm x 120 mm
- 5 minutes automatic power-off
- Stable metal housing
- Enhanced portability with PowerBank (optional)
- Dimensions and weight: 185 mm x 30 mm x 220 mm, 1.45 kg

Cat.No.	Size
BWL-T	1 piece

SERVA BlueShake

HS 84798200

SERVA BlueShake is a next generation rocking table. A solid aluminum housing, top quality electronic components and mechanics that meet the highest demands make BlueShake a laboratory device that is also ideally equipped for continuous use in research and diagnostic laboratories.
The device is characterized by a sturdy, durable construction: Built on an aluminum housing, it is equipped with robust, precisely running motors. The movement of the table can be controlled manually in all directions at a freely adjustable speed. For a gentle staining or immunoblotting process, the angle of inclination is 4°. The generously dimensioned touch screen is absolutely waterproof and, like the entire device, easy to clean. The built-in mechanism is maintenance-free.
The large touch screen allows easy and intuitive operation of the device. If necessary, adjust time, rocking direction and speed, start, done.

- 4° angle of inclination for gentle movement
- Large table surface for versatile use
- Timer function
- Direction of movement freely selectable (forward/ reverse - lateral - circular)
- Robust design - Made in Germany

Cat.No.	Size
BSH-01	1 piece

SERVA BlueStain

HS 84798200

SERVA BlueStain automatically stains polyacrylamide gels. Accurate, reproducible, user-friendly. The system pumps the required liquids into the gel tray. Pumping out after the preset incubation time is fast and complete. Thanks to SERVA BlueStain you can stain gel around gel using the same protocol. This makes the device interesting for research, but especially for the diagnostic laboratory.
The SERVA BlueStain staining machine as an universal gel stainer is used in research and diagnostics where a high number of gels have to be stained and/or a reproducible method is essential. The device is suitable for the whole range of currently applied staining methods. The simple operation, the absolutely robust mechanics and the results achieved with the device make it an indispensable tool in your laboratory. Programs are pre-installed on delivery, e.g. silver staining.
To start the staining process, first connect the appropriate storage containers (e.g. water, fixing solution, dye solution, waste, etc.) to the respective tubes. Now you can start after selecting the staining program. Using a simple export function, you can save the actual steps performed at the end of the staining process and thus document the corresponding log.
Due to flexible programming you can create your own logs or modify existing or pre-installed programs at any time. To do this, copy any program, make the desired changes and save the newly created program under its own name. You can also intervene in a program that is already running, i.e. cancel a step and go to the next step. This can be important, for example, in silver staining, in order to avoid overcoloring of the gel (silver mirror).

The device is characterized by a sturdy, long lasting construction: Built on an aluminum housing, equipped with robust, precisely running motors, sophisticated electronics and high-quality 10-valve pump technology.
The device is equipped with a staining tray measuring 30 cm x 25 cm for large-format gels. Optional equipment for staining gels with smaller formats is available. The movement of the table can be controlled manually in all directions at a freely adjustable speed. For a gentle staining process, the angle of inclination of the table is 4°. The generously dimensioned touch screen is absolutely waterproof and, like the entire device, easy to clean. The built-in mechanism is maintenance-free. Replacement tubes are available as accessories.

- Suitable for all staining protocols
- Pre-installed standard programs
- Free modification/entry of further programs
- 4° angle of inclination for gentle movement
- Large gel tray (30 cm x 25 cm)
- Optionally adaptable for mini gels and other formats

Cat.No.	Size
BST-01	1 piece

SERVA BlueStain Pharma Edition

HS 90278080

The SERVA BlueStain Pharma Edition includes the SERVA BlueStain, a specially configured printer and an upgraded preinstalled firmware. This combination is FDA CFR part11 ready:

- Password protected - password assignment exclusively by superuser
- Changes in program flow only by logged-in user
- Data transfer of executed programs to USB stick only by superuser
- IQ/OQ/PQ and maintenance contract on request

Cat.No.	Size
BST-PU	1 kit

SERVA BlueStain Printer

HS 90278080

Cat.No.	Size
BSP-01	1 piece

SERVA BlueStain Replacement Tray with Lid

HS 90272000

Cat.No.	Size
BST-RT	1 piece

SERVA BlueStain Spare Part Kit

HS 90272000
SERVA BlueStain spare part kit includes all spare parts needed for maintenance, like tubes, number clips, valve/pump tubing, connectors and zip ties.

Cat.No.	Size
BST-R01	1 kit

SERVA Cellophane Sheets II

HS 39207100

Format: 140 x 133 mm. For drying of mini vertical slab gels (up to 10 x 10 cm).

Cat.No.	Size
42524.01	200 sheets

SERVA Clear G Agarose Tablets

HS 38220000

SERVA Clear G Agarose Tablets are fast-solving tablets which already contain the optimal amount of the non-carcinogenic sensitive fluorescent dye DNA Stain Clear G.
Just add the running buffer of your choice, solve the agarose and your agarose gel is ready!

- For analytical and preparative DNA and RNA gel electrophoresis and blotting (100 bp - ≥30 kb)
- Fast-solving agarose for gels with high clarity and low background
- Optimized mixture for high resolution of sharp bands with high sensitivity
- No clumping because separately packed in blister pack

Cat.No.	Size
39811.01	100 Tablets

SERVA Co-IDA HD Agarose Resin

HS 38220000

High density cobalt-iminodiacetic acid (IDA) crosslinked agarose resin for low pressure affinity chromatography. The high amount of available cobalt chelate groups allows for high binding capacity. Cobalt chelates recognize two exposed vicinal histidine tags with excellent specificity, but lower affinity as nickel or zinc chelates. The Co-IDA agarose resin is therefore the optimal choice, if highly pure proteins are needed or difficult to separate proteins have to be purified. Suitable for batch or column purifications.
Binding/loading capacity: 20 - 40 µmol Me^{2+}/ml gel.

Cat.No.	Size
42143.01	25 ml
42143.02	100 ml

SERVA CSF Silver Staining Kit

DANGER
H225-H314-H331-H334-H411 ♦
HS 38220000

High sensitive silver staining kit for staining of up to 5 film-backed, ultra-thin horizontal IEF gels for CSF analysis.

Cat.No.	Size
43398.01	1 kit

SERVA DNA Stain G

WARNING
H315-H319 ♦ HS 38220000

SERVA DNA Stain G is a safer alternative to traditional ethidium bromide stain for detecting nucleic acids in agarose gels. It is at least as sensitive as ethidium bromide and can be used in exactly the same way in agarose gel electrophoresis. SERVA DNA Stain G can be added to the gel solution, working dilution is 1:20,000 to 1:50,000.
SERVA DNA Stain G emits green fluorescence when bound to DNA or RNA. It has one fluorescence exication maximum at ca. 300 nm and another at ca. 450 nm when bound to nucleic acid.
SERVA DNA Stain G is non-carcinogenic and according to the AMES test it causes significantly fewer mutations than ethidium bromide.

Cat.No.	Size
39803.01	1 ml
39803.02	5 x 1 ml

SERVA DNA Stain Clear G

WARNING
H315-H319 ♦ HS 38220000

SERVA DNA Stain Clear G is a new, non-carcinogenic, much more sensitive and convenient version of our SERVA DNA Stain G. It can be used instead of highly carcinogenic ethidium bromide for detecting nucleic acids in agarose gels.
SERVA DNA Stain Clear G emits green fluorescence when bound to DNA or RNA. It has two secondary fluorescence excitation peaks (ca. 270 nm and 295 nm) and one strong excitation peak centered around 490 nm. The fluorescence emission is similar to EtBr at ca. 530 nm when bound to nucleic acid.
Pre-casting and post-staining protocols are applicable.
1 ml of this stain is sufficient for 17 - 25 L of agarose gel.

Cat.No.	Size
39804.01	1 ml
39804.02	5 x 1 ml

SERVA DNA Standard 1 Kbp DNA Ladder, lyophilized

HS 38220000
Storage temperature -15 °C to -25 °C

The SERVA DNA Standard 1 Kbp DNA Ladder contains 11 fragments ranging from 500 bp to 10000 bp:
500, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 6000, 8000, 10000 bp.
All fragments with EcoRI ends for easy 5'-end labelling. Ideal for the analysis of larger DNA fragments generated by enzymatic restriction of plasmid DNA or for fragments generated by PCR in combination with SERVA DNA Standard 100 bp Ladder (cat. no. 39311 or 39312). The larger sized fragments are represented in lower mass, resulting in a clear grouping of the bands. The separation distance is 70 mm in a 1.2 % agarose gel.
Only 0.5 - 0.7 µg per lane are needed; for at least 300 applications.
Instructions of use and 2 ml loading dye solution for resuspension of the lyophilized DNA fragments are included.

Cat.No.	Size
39314.01	4 x 50 µg

SERVA DNA Standard 100 bp Ladder Equimolar, lyophilized

HS 38220000
Storage temperature -15 °C to -25 °C

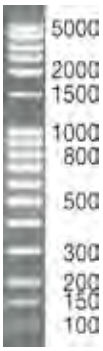
The SERVA DNA Standard 100 bp Ladder equimolar contains 11 fragments ranging from 100 bp to 1000 bp:
100, 150, 200, 300, 400, 500 (2x), 600, 700, 800, 900 and 1000 bp.
Ideal for the analysis of DNA fragments generated from plasmid DNA or for PCR generated DNA fragments. For optimal results use 1.5 - 2 % agarose gels. A separation distance of 60 - 80 mm is recommended. All fragments with EcoRI ends for easy labelling, the 5'-end labeled DNA marker behaves like an equalized DNA marker.
For at least 50 applications. Instructions of use and 1 ml separate loading dye solution for resuspension of the lyophilized DNA fragments are included.

Cat.No.	Size
39311.01	50 µg

SERVA DNA Standard 100 bp Ladder Extended, lyophilized

HS 38220000
Storage temperature -15 °C to -25 °C

The SERVA DNA Standard 100 bp Ladder extended contains 17 fragments ranging from 100 bp to 5000 bp:
100, 150, 200, 300, 400, 500 (2x), 600, 700, 800, 900, 1000, 1500, 2000, 2500, 3000, 4000 and 5000 bp.
Ideal for the analysis of DNA fragments generated from plasmid DNA or for PCR generated larger DNA fragments. For optimal results use 1.0 - 2.0 % agarose gels. A separation distance of 60 - 80 mm is recommended. All fragments with EcoRI ends for easy 5'-end labelling.
For at least 50 applications. Instructions of use and 1 ml separate loading dye solution for resuspension of the lyophilized DNA fragments are included.



Cat.No.	Size
39312.01	50 µg

SERVA Dryer Frame Kit

HS 90330000

For drying of mini vertical slab gels (to up to 10 x 10 cm). Containing 2 dryer frames and 200 cellophane sheets.

Cat.No.	Size
42523.01	1 kit

SERVA Dual Color Protein Standard III

HS 38220000
Storage temperature -15 °C to -25 °C ✻

SERVA Dual Color Protein Standard III is a dual color prestained size marker. It is a mixture of 10 recombinant prestained polypeptides with molecular weights ranging from 7 kDa to 240 kDa.
SERVA Dual Color Protein Standard III is ready-to-use without the need of reconstitution or further dilution. A blue and orange chromophore is covalently bound to proteins, and the 10 prestained proteins are visible during electrophoresis or on a membrane after Western Blotting.
The 25 kDa and 70 kDa proteins labelled with an orange chromophore are easily identified and serve as a landmark.
Recommended loading volume for a mini gel is 5 - 10 µl/lane.

Cat.No.	Size
39252.01	500 µl

SERVA FastLoad 50 bp DNA Ladder

HS 38220000
Storage temperature -15 °C to -25 °C

Ready-to-Use DNA standard for agarose gel electrophoresis containing 17 fragments from 50 – 1500 base pairs. The 200 bp and 500 bp bands have increased intensity and serve as reference points. For estimation of DNA mass of bands of similar size with comparable intensity, the approximate mass of each band is indicated (0.56 µg/load).
Recommended load is 5 µl/well. Contains Orange G as tracking dye.
Stable for 12 months at 4 °C. For long term storage store at -20 °C.

Cat.No.	Size
39315.01	500 µl

SERVA FastLoad 100 bp DNA Ladder

HS 38220000
Storage temperature -15 °C to -25 °C

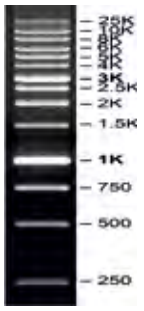
Ready-to-Use DNA standard for agarose gel electrophoresis containing 12 fragments from 100 – 3000 base pairs. The 500 bp and 1500 bp bands have increased intensity and serve as reference points. For estimation of DNA mass of bands of similar size with comparable intensity, the approximate mass of each band is indicated (0.54 µg/load).
Recommended load is 5 µl/well. Contains Orange G and Xylene Cyanol as tracking dye.
Stable for 6 months at 25 °C and for 12 months at 4 °C. For long term storage store at -20 °C.

Cat.No.	Size
39316.01	500 µl

SERVA FastLoad 1 kb DNA Ladder

HS 38220000
Storage temperature -15 °C to -25 °C

Ready-to-Use DNA standard for agarose gel electrophoresis containing 14 fragments from 250 – 25000 base pairs. The 1000 bp and 3000 bp bands have increased intensity and serve as reference points. For estimation of DNA mass of bands of similar size with comparable intensity, the approximate mass of each band is indicated (0.52 µg/load).
Recommended load is 5 µl/well. Contains Orange G and Xylene Cyanol as tracking dye.
Stable for 6 months at 25 °C and for 12 months at 4 °C. For long term storage store at -20 °C.



Cat.No.	Size
39317.01	500 µl

SERVA HiSens Stain G

HS 38220000
Storage temperature +2 °C to +8 °C

SERVA HiSens Stain G is a highly sensitive, non-carcinogenic, non-toxic fluorescent nucleic acid stain, specially designed for in-gel staining of agarose gels. It stains double-stranded or single-stranded DNA and RNA with a sensitivity several times greater than EtBr. The detection limit in in-gel staining is around 0.1 ng of a 4-kb dsDNA band.

The stain can be detected with standard UV as well as with blue light tables. When bound to nucleic acids, the stain has fluorescent excitation maxima of 250 and 480 nm, and an emission maximum of 509 nm.

The stain is provided as a ready-to-use 10 000x stock solution.

Cat.No.	Size
39805.01	500 µl

SERVA HPE™ Coomassie® Staining Kit

HS 38220000

Colloidal staining kit for highly sensitive staining of 1D and 2D gels after electrophoresis. The kit contains two components to be mixed together prior to use. Kit contains enough reagents to stain 4 large 2D HPE™ gels. Reagents are MS compatible for downstream mass spectrometry analysis.

Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
43396.01	1 kit

SERVA HPE™ IPG Overlay

HS 27101985

Overlay oil to cover IPG strips during high voltage isoelectric focusing of proteins with no influence on separation behaviour of the IPG strip. Usage of the SERVA IPG Overlay is an important factor for sharp protein spots in high resolution 2D gel electrophoresis. For easy application of the oil a separate dropping bottle is included.

Cat.No.	Size
43397.01	1 L

SERVA HPE™ IPG Strip Buffer

HS 38220000
Storage temperature +2 °C to +8 °C

1 ml 40 % (w/v) SERVALYT™ mixture (pH 3-10) for IPG strip rehydration and sample preparation for 2D electrophoresis.
SERVA IPG strip buffer works for all IPG strips pH gradients. Due to the low molecular weights of the SERVALYT™ buffer molecules there is no background staining in the 2D gels.

Cat.No.	Size
43368.01	1 ml

SERVA HPE™ Lightning Red

(Fluorescence labelling)
HS 38220000
Storage temperature +2 °C to +8 °C

SERVA HPE™ Lightning Red is a fluorescent dye for rapid labelling of proteins prior to 2D PAGE, making any staining and washing steps after electrophoresis unnecessary. In addition the dye is fully compatible with mass spectrometry and other downstream methods like Western Blotting.
The labelling procedure is simple and quick:
Typically use 80 pmol SERVA HPE™ Lightning Red for labelling of 1 µg protein. Incubate at 0 °C for 15 min. The labelled protein solution is directly applied to an IPG strip via cup- or rehydration loading.
After the 2D run, detection of labelled proteins is performed by fluorescent imager (camera or scanner) at an excitation wavelength of about 530 nm and emission filter of 610 nm with a narrow band width of 30 nm.
SERVA HPE™ Lightning Red is compatible with all additives typically used for sample solubilization and protein extraction, including carrier ampholytes and reductants.
Alkalescent conditions are sufficient, it is not required to titrate the pH to a defined value.

- Direct detection
- No staining and washing steps after the run
- Very high sensitivity, < 100 pg protein / spot
- Wide dynamic and linear range of > 10^4
- No over-staining effects
- Fully MS and Western Blotting compatible

The kit contains 250 µg SERVA HPE™ Lightning Red dye and DMSO.

Cat.No.	Size
43400.01	1 kit

SERVA HPE™ Silver Staining Kit

DANGER
H301-H311-H331-H334-H351-H410 ♦
HS 38220000

Silver staining kit for highly sensitive silver staining of 2D gels. Kit contains reagents to stain 4 large 2D HPE™ gels. Reagents are MS compatible for downstream mass spectrometry analysis.

Cat.No.	Size
43395.01	1 kit

SERVA ICPL™ Kit

WARNING
H290-H302-H315-H317-H318-H319-H334-H335-H351i ♦ HS 38220000
Storage temperature -15 °C to -25 °C

The powerful ICPL™ technology for comparative quantification of proteins with two labels:
1 - ($^{12}C_6{}^1H_4$)-Nicotinoyloxy-succinimide
1 - ($^{13}C_6{}^2H_4$)-Nicotinoyloxy-succinimide
Applying the ICPL™ method the simultaneous quantitative analysis of two independent proteome samples can be performed by stable protein labelling side by side.
The kit contains ^{12}C- and ^{13}C-Nic-reagent, stop solution 1 + 2, reduction solution, alkylation reagent, lysis buffer and standard protein mix A + B.
The kit contains reagents for 2 x 6 reactions. A detailed instruction manual is included.

ICPL = trademark of TopLab GmbH, Martinsried, Germany

References:
1. Schmidt, A., Kellermann, J. and Lottspeich, F. (2005), Proteomics ***5***, 4-15
2. Brunner, A., Keidel, E., Dosch, D., Kellermann, J. and Lottspeich, F. (2010) Proteomics ***10***, 315-326

Cat.No.	Size
39230.01	1 kit

SERVA ICPL™ Triplex Kit

WARNING
H302-H315-H317-H319-H335-H351-H373 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

The powerful ICPL™ technology for comparative quantification of proteins with three labels:
1 - ($^{12}C_6{}^1H_4$)-Nicotinoyloxy-succinimide
1 - ($^{12}C_6{}^2D_4$)-Nicotinoyloxy-succinimide
1 - ($^{13}C_6{}^2H_4$)-Nicotinoyloxy-succinimide
Applying the ICPL™ triplex method the simultaneous quantitative analysis of three independent proteome samples can be performed by stable protein labelling side by side.
The kit contains ^{12}C-, ^2D- and ^{13}C- Nic-reagent, stop solution 1 + 2, reduction solution, alkylation reagent, lysis buffer and standard protein mix A, B and C.
The kit contains reagents for 3 x 6 reactions. A detailed instruction manual is included.

ICPL = trademark of TopLab GmbH, Martinsried, Germany

References:
1. Schmidt, A., Kellermann, J. and Lottspeich, F. (2005), Proteomics ***5***, 4-15
2. Brunner, A., Keidel, E., Dosch, D., Kellermann, J. and Lottspeich, F. (2010) Proteomics ***10***, 315-326

Cat.No.	Size
39231.01	1 kit

SERVA ICPL™ Quadruplex Kit

WARNING
H302-H315-H317-H319-H335-H351-H373 ♦ HS 38220000
Storage temperature -15 °C to -25 °C

The powerful ICPL™ technology for comparative quantification of proteins with four labels:
1 - ($^{12}C_6{}^1H_4$)-Nicotinoyloxy-succinimide
1 - ($^{12}C_6{}^2D_4$)-Nicotinoyloxy-succinimide
1 - ($^{13}C_6{}^2H_4$)-Nicotinoyloxy-succinimide
1 - ($^{13}C_6{}^2D_4$)-Nicotinoyloxy-succinimide.

Applying the ICPL™ quadruplex method the simultaneous quantitative analysis of four independent proteome samples can be performed by stable protein labelling side by side. The kit contains ^{12}C-, ^2D-, ^{13}C and $^{13}C^2D$- Nic-reagent, stop solution 1 + 2, reduction solution, alkylation reagent, lysis buffer and standard protein mix A, B, C and X. The kit contains reagents for 4 x 6 reactions. A detailed instruction manual is included.

ICPL = trademark of TopLab GmbH, Martinsried, Germany

References:
1. Schmidt, A., Kellermann, J. and Lottspeich, F. (2005), Proteomics ***5***, 4-15
2. Brunner, A., Keidel, E., Dosch, D., Kellermann, J. and Lottspeich, F. (2010) Proteomics ***10***, 315-326

Cat.No.	Size
39232.01	1 kit

SERVA ICPL™ Quadruplex Plus Kit

WARNING
H302-H315-H317-H319-H335-H351 ♦ HS 38220000
Storage temperature -15 °C to -25 °C ✻

Applying the ICPL™ quadruplex method the simultaneous quantitative analysis of four independent proteome samples can be performed by stable protein labelling side by side.
Included are MS approved endoproteinases Trypsin NB and Glu-C for achieving the highest sequence coverage. All four labels can be freely combined with each other. By omitting one label you can as well compare only two or three samples. The enclosed ICPL™-Standard PLUS allows calibration of the analysis system.
The kit contains ^{12}C-, ^2D-, ^{13}C and $^{13}C^2D$- Nic-reagent, stop solution 1 + 2, reduction solution, alkylation reagent, lysis buffer, standard protein mix A, B, C and X, ICPL™-Standard PLUS, Trypsin modified, and Endoproteinase Glu-C . The kit contains reagents for 4 x 6 reactions. A detailed instruction manual is included.

ICPL = trademark of TopLab GmbH, Martinsried, Germany

References:
1. Schmidt, A., Kellermann, J. and Lottspeich, F. (2005), Proteomics ***5***, 4-15
2. Brunner, A., Keidel, E., Dosch, D., Kellermann, J. and Lottspeich, F. (2010) Proteomics ***10***, 315-326

Cat.No.	Size
39233.01	1 kit

SERVA IPG *Blue*Strip 3-10 / 7 cm

(IPG Strips)
HS 38220000
Storage temperature -15 °C to -25 °C ✻✻

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43001.01	12 strips

SERVA IPG *Blue*Strip 3-10 / 11 cm

HS 38220000
Storage temperature -15 °C to -25 °C ✻✻

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43031.01	12 strips

SERVA IPG *Blue*Strip 3-10 / 17 cm

HS 38220000
Storage temperature -15 °C to -25 °C ✻✻

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43041.01	12 strips

SERVA IPG *Blue*Strip 3-10 / 18 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43011.01	12 strips

SERVA IPG *Blue*Strip 3-10 / 24 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43021.01	12 strips

SERVA IPG *Blue*Strip 3-10 NL / 7 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43002.01	12 strips

SERVA IPG *Blue*Strip 3-10 NL / 11 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43032.01	12 strips

SERVA IPG *Blue*Strip 3-10 NL / 17 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43042.01	12 strips

SERVA IPG *Blue*Strip 3-10 NL / 18 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43012.01	12 strips

SERVA IPG *Blue*Strip 3-10 NL / 24 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43022.01	12 strips

SERVA IPG *Blue*Strip 3-6 / 7 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43005.01	12 strips

SERVA IPG *Blue*Strip 3-6 / 11 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43035.01	12 strips

SERVA IPG *Blue*Strip 3-6 / 17 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG vStrips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43045.01	12 strips

SERVA IPG *Blue*Strip 3-6 / 18 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43015.01	12 strips

SERVA IPG *Blue*Strip 3-6 / 24 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43025.01	12 strips

SERVA IPG *Blue*Strip 4-7 / 7 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43003.01	12 strips

SERVA IPG *Blue*Strip 4-7 / 11 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43033.01	12 strips

SERVA IPG *Blue*Strip 4-7 / 17 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43043.01	12 strips

SERVA IPG *Blue*Strip 4-7 / 18 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43013.01	12 strips

SERVA IPG *Blue*Strip 4-7 / 24 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43023.01	12 strips

SERVA IPG *Blue*Strip 5-8 / 7 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43006.01	12 strips

SERVA IPG *Blue*Strip 5-8 / 11 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43036.01	12 strips

SERVA IPG *Blue*Strip 5-8 / 17 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43046.01	12 strips

SERVA IPG *Blue*Strip 5-8 / 18 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43016.01	12 strips

SERVA IPG *Blue*Strip 5-8 / 24 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43026.01	12 strips

SERVA IPG *Blue*Strip 6-10 / 7 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43004.01	12 strips

SERVA IPG *Blue*Strip 6-10 / 11 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43034.01	12 strips

SERVA IPG *Blue*Strip 6-10 / 17 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43044.01	12 strips

SERVA IPG *Blue*Strip 6-10 / 18 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43013.01	12 strips

SERVA IPG *Blue*Strip 6-10 / 24 cm

HS 38220000
Storage temperature -15 °C to -25 °C ❄❄

SERVA IPG *Blue*Strips are dried gel strips with immobilized pH gradient used in high resolution 2D gel electrophoresis of proteins. The strips have to be rehydrated before use. The homogeneous polyacrylamide gel matrix is covalently bound to GEL-FIX™ to stabilize the gel. Additionally, a non-binding cover film (GEL-FIX™ for Covers) protects the gel from damage and contamination. Each gel strip has its own lot number printed on and, therefore, is suitable for documentation according to GMP/GLP.
Each package contains 12 gel strips (all derived from the same production lot). Other pH gradients and gel strip lengths are available upon request.

Cat.No.	Size
43024.01	12 strips

SERVA Lightning Sci2 lyophilized

HS 38220000
Storage temperature -15 °C to -25 °C

SERVA Lightning Sci2 is a Cyanine2 NHS ester for minimal labelling and maximum detection of proteins prior to protein detection in 2D Fluorescence Difference Gel Electrophoresis (DIGE). Minimal labelling with SERVA Lightning Sci2, Sci3 and Sci5 allows for the precise comparison of protein expression in two or three samples. The dyes are charge- and size-matched enabling high efficient detection and high resolution of minor proteins on 2D gel electrophoresis. SERVA Lightning Sci2 is compatible with all imagers suitable for detection of Cy2®. Gels labelled with SERVA Lightning SciDyes are ready for subsequent mass spectrometry analysis.
Each vial contains specified amount of NHS ester with a tolerance variation of 10 %.

Special properties:

Fluorescence colour	Green
Excitation maximum	490 nm
Emission maximum	510 nm

Cy2® = trademark of GE Healthcare Company

Cat.No.	Size
43404.01	5 NMOL
43404.02	10 NMOL
43404.03	25 NMOL

SERVA Lightning Sci3 lyophilized

HS 38220000
Storage temperature -15 °C to -25 °C

SERVA Lightning Sci3 is a Cyanine3 NHS ester for minimal labelling and maximum detection of proteins prior to protein detection in 2D Fluorescence Difference Gel Electrophoresis (DIGE). Minimal labelling with SERVA Lightning Sci2, Sci3 and Sci5 allows for the precise comparison of protein expression in two or three samples. The dyes are charge- and size-matched enabling high efficient detection and high resolution of minor proteins on 2D gel electrophoresis. SERVA Lightning Sci3 is compatible with all imagers suitable for detection of Cy3®. Gels labelled with SERVA Lightning SciDyes are ready for subsequent mass spectrometry analysis.
Each vial contains specified amount of NHS ester with a tolerance variation of 10 %.

Spectral properties:

Fluorescence colour	Yellow
Excitation maximum	555 nm
Emission maximum	570 nm

Cy3® = trademark of GE Healthcare Company

Cat.No.	Size
43405.01	5 NMOL
43405.02	10 NMOL
43405.03	25 NMOL

SERVA Lightning Sci5 lyophilized

HS 38220000
Storage temperature -15 °C to -25 °C

SERVA Lightning Sci5 is a Cyanine5 NHS ester for minimal labelling and maximum detection of proteins prior to protein detection in 2D Fluorescence Difference Gel Electrophoresis (DIGE). Minimal labelling with SERVA Lightning Sci2, Sci3 and Sci5 allows for the precise comparison of protein expression in two or three samples. The dyes are charge- and size-matched enabling high efficient detection and high resolution of minor proteins on 2D gel electrophoresis. SERVA Lightning Sci5 is compatible with all imagers suitable for detection of Cy5®. Gels labelled with SERVA Lightning SciDyes are ready for subsequent mass spectrometry analysis.
Each vial contains specified amount of NHS ester with a tolerance variation of 10 %.

Spectral properties:

Fluorescence colour	Red
Excitation maximum	645 nm
Emission maximum	660 nm

*Cy5® = trademark of GE Healthcare Company*y

Cat.No.	Size
43406.01	5 NMOL
43406.02	10 NMOL
43406.03	25 NMOL

SERVA Lightning SciDye Set

HS 38220000
Storage temperature -15 °C to -25 °C

SERVA Lightning SciDyes are designed for minimal labelling and maximum detection of proteins prior to protein detection in 2D Fluorescence Difference Gel Electrophoresis (DIGE). They allow for the precise comparison of protein expression in two or three samples. SERVA Lightning SciDyes are compatible with all imagers suitable for detection of Cy2®, Cy3® and Cy5®. Gels labelled with SERVA Lightning SciDyes are ready for subsequent mass spectrometry analysis.
SERVA Lightning SciDye Set consists of one vial each of SERVA Lightning Sci2 (cat. no. 43404) SERVA Lightning Sci3 (cat. no. 43405) and SERVA Lightning Sci5 (cat. no. 43406).
Each vial contains specified amount of NHS ester with a tolerance variation of 10 %.

Cy2®, Cy3® and Cy®5 = trademarks of GE Healthcare Company

Cat.No.	Size
43407.01	5 NMOL
43407.02	10 NMOL
43407.03	25 NMOL

SERVA Mag Rack

HS 90279050

Rack for 12 tubes from 0.5 up to 2.0 ml.
To separate magnetic beads from liquid simply raise the plate equipped with 12 single magnets, the position of the plate will be secured by one extra magnet at each site. The magnetic particles will be attached to one site of the tube, allowing the researcher to pipette out the solution very easily, leaving the magnetic particles in the tube.

Cat.No.	Size
MR-12	1 piece

SERVA Musketeer

HS 90275000

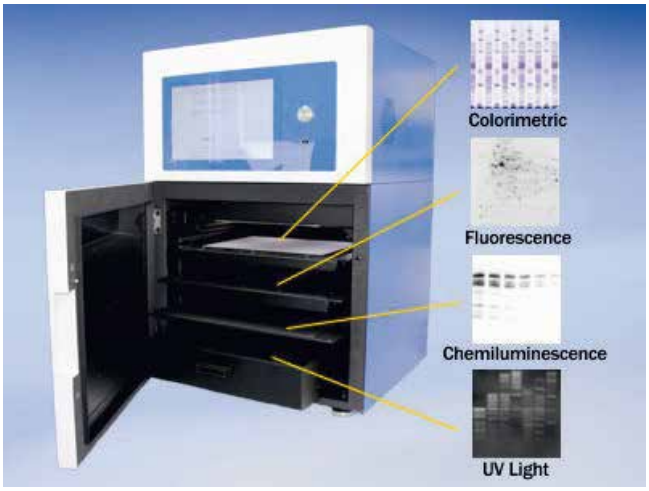
The **SERVA Musketeer** is an advanced gel documentation system with user-friendly features, easy operation and quick response. This imaging system consists of a scientific CCD camera, motor driven lens, and white backlight board. The chemiluminescence treatment such as ECL can easily be observed and captured by the SERVA Musketeer and the fluorescence stains such as SERVA Lightning Red, SERVA Lightning Sci3, Cy3, SYPRO Ruby, Alexa 546, Alexa 647, etc. excited by RGB

Followed the all in one design concept of a single workstation, the SERVA Musketeer works independently and does not require a separate computer to operate the system. A built-in touch screen LCD panel of the SERVA Musketeer can directly handle the entire imaging procedure without any difficulty. Moreover, the smart user-friendly interface and vivid icons on the SERVA Musketeer allows for capturing of the gel images quickly and easily. With SERVA Musketeer, you will experience a hassle free process of collecting the gel imaging data in your laboratory.

The instrument is IQ/OQ/PQ and FDA CFR Part 11 ready with LabImage software. SERVA Musketeer is equipped with red, green, and blue LED transilluminator and epi lights and the appropriate filters. Thus, wide range of fluorescence applications may be processed through light source excitations:

- Blue light applications: SERVA Lightning Red (1D, 2D), SERVA Purple, SERVA Lightning Sci2, Cy2, SERVA Fluo-R, SERVA DNA Stain Clear G, SYBR stains, SYPRO Ruby, FITC, ethidium bromide, etc.
- Green light applications: SERVA Lightning Sci3, Cy3, AlexaG 546, AlexaG 555, AlexaG 568, Nile red, Rhodamine B, TRITC, etc.
- Red light applications: SERVA Lightning Sci5, Cy5, AlexaG 647, AlexaG 660, allophycocyanin, TO-PROG-3, etc.

A UV and white light transilluminator as well as epi R/G/B/ and epi white light are installed.



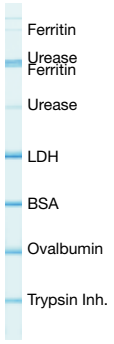
Cat.No.	Size
MSK-01	1 piece

SERVA Native Marker, Liquid Mix for BN/CN

HS 38220000
Storage temperature -15 °C to -25 °C

Molecular Weight Marker for Blue and Clear Native PAGE. Ready-to-use. Contains native proteins ranging from 720 kDa to 21 kDa.

Ferritin horse	M_r 450 000/720 000
Urease jack bean	M_r 272 000/545 000
Lactate dehydrogenase porcine	M_r 146 000
Albumin bovine	M_r 67 000
Albumin egg	M_r 45 000
Trypsin inhibitor soybean	M_r 21 000



Cat.No.	Size
39219.01	5 x 50 µl

SERVA Ni-IDA HD Agarose Resin

HS 38220000

High density nickel-iminodiacetic acid (IDA) crosslinked agarose resin for low pressure affinity chromatography. The high amount of available nickel chelate groups allows for high binding capacity. Nickel chelates recognize two exposed histidine tags with high specificity and very high affinity. Therefore a nickel charged matrix is recommended for most standard purifications. Suitable for batch or column purifications. Binding/loading capacity: 20 - 40 µmol Me^{2+}/ml gel.

Cat.No.	Size
42141.01	25 ml
42141.02	100 ml

SERVA Ni-NTA Agarose Resin

(NTA-Agarose Resins)
HS 38220000
Storage temperature +2 °C to +8 °C

High capacity nickel-nitrilotriacetic acid (NTA) crosslinked agarose resin for low pressure affinity chromatography. The four metal-binding sites on the chelate enable high-protein binding and minimal metal leaching. Ideal for purification under denaturing conditions. Handling is easy and identical to standard protocols of other manufacturers, therefore there is no need to change established protocols. Suitable for batch and column purification. Binding capacity: > 50 mg/ml gel.

Cat.No.	Size
42139.01	25 ml
42139.02	100 ml

SERVA Ni-NTA Magnetic Beads

HS 38220000
Storage temperature +2 °C to +8 °C

High capacity nickel-nitrilotriacetic acid (NTA) magnetic agarose beads (5 %) for rapid and easy small scale purification of His-tagged proteins under native or denaturing conditions.
Binding capacity: > 75 mg His-tagged protein/ml gel.

Cat.No.	Size
42179.01	2 ml
42179.02	10 ml

SERVA PRiME Lightning Red

HS 38220000
Storage temperature +2 °C to +8 °C

SERVA Lightning Red is a fluorescent dye for rapid labelling of proteins prior to SDS PAGE and/or Western Blotting, making any staining and washing steps after electrophoresis unnecessary. Normalization in Western Blots by using the total protein signal on the membrane as loading control can be easily done with the pre-labelled samples. In addition, the dye is fully compatible with mass spectrometry and other downstream methods.
The labelling procedure is simple and quick: 2 - 5 min for qualitative and 30 min for quantitative analysis.
For separation of the labelled proteins a wide range of gel formats including precast gels in plastic cassettes like SERVA*Gel* PRiME Vertical Mini Gels and film-backed gels can be used.
The labelling works with complex and purified samples in a protein concentration range between 1 µg/ml up to 20 mg/ml - no need for protein concentration measurement or purification and concentration steps before or after labelling.

After the run, detection of labelled proteins is performed by fluorescent imager (camera or scanner) at an excitation wavelength of about 530 nm and emission filter of 610 nm with a narrow band width of 30 nm.
Depending on the used protocol sufficient for 250 - 1250 lanes - no matter what size of gel (mini, wide or large format) you use.

- Simple and fast pre-labelling of proteins for SDS PAGE and Western Blotting
- No need for protein concentration measurement or purification and concentration steps before or after labelling
- No staining and washing steps after the run
- Broad protein concentration range
- Very high sensitivity, very low background
- Wide dynamic and linear range
- Compatible with all common gel electrophoresis buffer systems and mass spectrometry

Cat.No.	Size
43402.01	1 kit

SERVA ProteinStain Fluo-R powder

$C_{72}H_{42}N_6O_{18}S_6 \bullet Na_4Ru$ ♦ M_r 1664.5

WGK 2L ♦ HS 28439090

SERVA ProteinStain Fluo-R is a highly sensitive fluorescent dye for detection of proteins in e. g. SDS PAGE, native PAGE or 2D gels. The dye does not interfere with immunodetection. Therefore you can stain your gel with SERVA ProteinStain Fluo-R and then proceed with Western Blotting receiving a copy of your gel on the membrane.
The dye can as well be used for pre-staining, just use it in the loading buffer instead of bromophenol blue or other dyes.
It is as sensitive as silver staining, but has superior staining properties, which makes it the first choice for proteomic research. The dye has a good linearity, high contrast and is compatible with MS/MS analysis. The staining can be as well combined with silver staining and DIGE.
The dye is easily soluble in water. Just dissolve 5 mg in 3 L water to receive a 1 µM staining solution. Or prepare a 20 mM stock solution by dissolving 5 mg in 150 µl water. The dye is best excited with blue light of wave length 473/488 nm. Excitation with laser light of wave length 532 nm is as well possible, but less sensitive.

Cat.No.	Size
35090.01	5 mg

SERVA ProteinStain Fluo-Y solution, 100x

(Fluorescence staining)
HS 38220000
Storage temperature +2 °C to +8 °C ✻

SERVA ProteinStain Fluo-Y is a fast and sensitive fluorescent protein stain for 1D or 2D SDS PAGE. The 100x stock solution is simply diluted with water to its working concentration. After binding of the dye to proteins, it emits a strong fluorescence of bright golden colour. The maximum emission wave length of protein-bound dye is near 570 nm. Gels stained with SERVA ProteinStain Fluo-Y may be directly visualized with a variety of different UV-based fluorescence imaging systems.
Gels are fixed with ethanol/acetic acid solution and then directly stained with SERVA ProteinStain Fluo-Y. The whole staining procedure is completed in as little as 30 min. A destaining step is usually not necessary. But for reduction of background, simply wash gels in water for 1 – 5 min.
The bound dye is easily removed from the protein by washing the gel with sufficient water. Thus the staining is compatible with subsequent mass spectrometric analysis. Stained gels may be stored in stain solution in the dark at 2 – 8 °C.

- Highly sensitive fluorescent protein stain over a wide dynamic range
- Two-step protocol, no destain
- Directly detected by UV imaging systems
- MS compatible

Cat.No.	Size
35092.01	10 ml

SERVA Proteome Markers

HS 38220000
Storage temperature -15 °C to -25 °C

5 vials of marker proteins, lyophilized, approx. 5 -10 applications per vial for 2D electrophoresis.

Glucose oxidase (*Aspergillus niger*)	M_r 77 000
Albumin (bovine)	M_r 67 000
Catalase	M_r 58 000
Lipase (from bacteria)	M_r 33 000
Glucose-1-dehydrogenase (from bacteria; M_r 113 000)	M_r 32 000 (subunits)
β-Lactoglobulin (bovine)	M_r 18 400
Myoglobin (horse)	M_r 17 800
Cytochrome C (horse)	M_r 11 700

Cat.No.	Size
39220.01	1 kit

SERVA Purple Protein Quantification Assay

HS 38220000
Storage temperature -15 °C to -25 °C

The assay bases on the eco-friendly fluorescent dye SERVA Purple. The dye reversibly binds to lysine, arginine, and histidine residues in proteins and peptides to yield an intensely red-fluorescent product (λ_{Ex} 518 nm, λ_{Em} 610 nm). The assay exhibits very low protein binding variation, leading to more accurate protein concentration values.

- Fast and simple - no heating and reduction steps, completed in 1 h
- Compatible with many detergents and reducing agents
- Accurate staining of glyco-, phospho-, hydrophobic proteins and peptides
- Single tube and 96- or 384-well-format for high-throughput
- Detection limit of 100 ng/ml for peptides and 40 ng/ml for proteins
- Linear quantification over 3 orders of magnitude
- Compatible with downstream applications like 1D- and 2D-PAGE, MS, DIGE-labelling, HPLC

Cat.No.	Size
39235.01	10 ml

SERVA Purple, 250x concentrate

DANGER
H225-H302-H312-H319-H332 ♦ GGVSE/ADR 3 II UN1648 ♦ IATA 3 II UN1648 ♦ WGK 2L ♦ HS 38220000
Storage temperature -15 °C to -25 °C

The fluorescent dye Deep Purple (marketed by GE) and LavaPurple (marketed by Gelcompany and SERVA) has been used by many laboratories for staining proteins in gels and on blotting membranes. The dye is based on a small naturally occurring fluorescent compound “Epicocconone” that reversibly binds to lysine, arginine, and histidine residues in proteins and peptides to yield an intensely red-fluorescent product. SERVA Purple is a further development of this compound “Epicocconone”. It has improved properties due to a novel production and purification technology by unchanged cost-effectiveness compared to other fluorescence dyes or even silver staining.

- Environmentally friendly, easy to use
- Sensitivity to as low as 50 pg/band
- Linear quantification over 4 orders of magnitude
- Compatible with MS, DIGE-labelling
- After imaging gel can be further processed by Western Blotting

References:
1. Moritz C.P. et al. (2014) Proteomics, Vol. ***14***, Issue 2-3, p. 162–8, Epicocconone staining: a powerful loading control for Western blots.

Cat.No.	Size
43386.03	5 ml
43386.01	25 ml

SERVA Purple HiSens, 250x concentrate

DANGER
H225-H302-H312-H319-H332 ♦ GGVSE/ADR 3 II UN1648 ♦ IATA 3 II UN1648 ♦ WGK 2L ♦ HS 38220000
Storage temperature -15 °C to -25 °C

Total protein stain for non-denaturing and denaturing 1D and 2D gel electrophoresis and blotting. The dye reversibly binds to lysine, arginine, and histidine residues in proteins and peptides to yield an intensely red-fluorescent product (λEx 518 nm, λEm 610 nm).
SERVA Purple HiSens shows highest sensitivity compared to most other protein stains. Even difficult to stain proteins as glycoproteins and lipoproteins can be accurately detected.
Although this modified version of SERVA Purple has a significantly increased sensitivity, its cost-effectiveness as against other fluorescent dyes or even silver staining is unchanged.

- Environmentally friendly, easy to use
- Sensitivity to as low as <20 pg/band
- Linear quantification over 4 orders of magnitude
- Compatible with MS, DIGE-labelling
- After imaging gel can be further processed by Western Blotting

References:
1. Moritz C.P. et al. (2014) Proteomics, Vol. ***14***, Issue 2-3, p. 162–8, Epicocconone staining: a powerful loading control for Western blots.

Cat.No.	Size
43408.01	5 ml
43408.02	25 ml

SERVA Silver Staining Kit Native PAGE for 25 gels

DANGER
H301-H311-H314-H317-H351-H411 ♦
HS 38220000

Silver staining kit for easy and rapid staining of proteins after native PAGE, e.g. of IEF gels:

- ◆ Contains everything needed for fixation and staining
- ◆ Fast staining procedure (45 - 60 min.)
- ◆ Very low background
- ◆ High sensitivity
- ◆ With detailed staining manual
- ◆ For 25 applications

Cat.No.	Size
35077.01	1 kit

SERVA Silver Staining Kit SDS PAGE for 25 gels

DANGER
H226-H301-H311-H314-H317-H351
-H411 ♦ HS 38220000

Silver staining kit for easy and rapid staining of proteins after SDS PAGE:

- ◆ Contains everything needed for fixation and staining
- ◆ Fast staining procedure (45 - 60 min.)
- ◆ Very low background
- ◆ High sensitivity
- ◆ With detailed staining manual
- ◆ For 25 applications

Cat.No.	Size
35076.01	1 kit

SERVA Streptavidin Agarose Resin

HS 38220000
Storage temperature +2 °C to +8 °C

High specific activity streptavidin immobilized on 6 % highly crosslinked agarose for easy isolation of biotinylated biomolecules and cell sorting. The superior coupling chemistry used to prepare this resin leads to a higher binding capacity with lower non-specific binding and less leaching. Handling is easy and identical to standard protocols of other manufacturers, therefore there is no need to change established protocols. Suitable for batch and column purification.
Binding capacity: > 120 nmol biotin/ml gel

Cat.No.	Size
42178.01	5 ml
42178.02	10 ml

SERVA TAE Clear G Agarose Tablets

HS 38220000

SERVA TAE Clear G Agarose Tablets are fast-solving tablets which not only contain TAE buffer but as well the non-carcinogenic, sensitive fluorescent dye DNA Stain Clear G.
Just add water, solve the agarose and your agarose gel is ready!

- ◆ For analytical and preparative DNA and RNA gel electrophoresis and blotting (100 bp - ≥30 kb)
- ◆ Fast-solving agarose for gels with high clarity and low background
- ◆ Optimized mixture for high resolution of sharp bands with high sensitivity
- ◆ No clumping because separately packed in blister pack

Cat.No.	Size
39807.01	75 TABLETS

SERVA TBE Clear G Agarose Tablets

HS 38220000

SERVA TBE Clear G Agarose Tablets are fast-solving tablets which not only contain TBE buffer but as well the non-carcinogenic, sensitive fluorescence dye DNA Stain Clear G.
Just add water, solve the agarose and your agarose gel is ready!

- ◆ For analytical and preparative DNA and RNA gel electrophoresis and blotting (100 bp - ≥30 kb)
- ◆ Fast-solving agarose for gels with high clarity and low background
- ◆ Optimized mixture for high resolution of sharp bands with high sensitivity
- ◆ No clumping because separately packed in blister pack

Cat.No.	Size
39806.01	75 tablets

SERVA Triple Color Protein Standard II

HS 38220000
Storage temperature -15 °C to -25 °C

SERVA Triple Color Protein Standard II is a mixture of 10 pre-stained proteins of a molecular weight range from 11 to 180 kDa (separation on a SDS Tris-glycine gel). Proteins are covalently coupled with a blue chromophore except for one green band at 25 kDa and one red band at 75 kDa (separation on a SDS Tris-glycine gel).
It is provided in a ready-to-use formula and no heating, further dilution or adding of reducing reagents is necessary before use. SERVA Triple Color Protein Standard II is designed for monitoring protein separation during SDS PAGE, verification of Western Blotting transfer efficiency and for approximate sizing of proteins.
The marker is stable for up to two weeks at 25 °C and for up to 3 months at 4 °C. Recommended loading volume for a mini gel is 3 – 5 µl/lane.

Cat.No.	Size
39257.01	500 µl

SERVA Triple Color Protein Standard III

HS 38220000
Storage temperature -15 °C to -25 °C

SERVA Triple Color Protein Standard III is a mixture of 13 pre-stained proteins of a molecular weight range from 5 to 245 kDa (separation on a SDS Tris-glycine gel). Proteins are covalently coupled with a blue chromophore except for one green band at 25 kDa and one red band at 75 kDa (separation on a SDS Tris-glycine gel).
It is provided in a ready-to-use formula and no heating, further dilution or adding of reducing reagents is necessary before use. SERVA Triple Color Protein Standard III is designed for monitoring protein separation during SDS PAGE, verification of Western Blotting transfer efficiency and for approximate sizing of proteins.
The marker is stable for up to two weeks at 25 °C and for up to 3 months at 4 °C. Recommended loading volume for a mini gel is 3 – 5 µl/lane.

Cat.No.	Size
39258.01	500 µl

SERVA Tris-Glycine Native Electrophoresis Buffer (10x)

HS 38220000

Running buffer for native PAGE. Supplied as 10 x concentrate.
Contains 250 mM Tris, 1.92 M glycine.

Cat.No.	Size
42530.01	1 L

SERVA Tris-Glycine Native Sample Buffer (2x)

HS 38220000
Storage temperature +2 °C to +8 °C

Sample buffer for native PAGE. Supplied as 2 x concentrate. Contains 126 mM Tris/HCl (pH 6.8), 20 % glycerol and 0.02 % bromophenol blue.

Cat.No.	Size
42528.01	20 ml

SERVA Tris-Glycine/LDS Sample Buffer (4x)

HS 38220000
Storage temperature +2 °C to +8 °C

Modified sample buffer for SDS PAGE, delivered as 4x concentrate. Lithium dodecyl sulfate (LDS) replaces the commonly used sodium dodecyl sulfate (SDS) in the triethanolamine buffered sample buffer. LDS prevents degradation of proteins during sample preparation and heating and stabilizes the pH of the sample during gel run. It does not crystallize at lower temperatures due to significantly better solubility than SDS. Hence, protein stability as well as band resolution is significantly enhanced by cooled gel runs.
For reducing conditions the sample buffer may be supplemented with 10 mM DTT or 5 % β-mercaptoethanol (end concentration 1x sample buffer).
Contains:
Triethanolamine buffered, 40 % glycerol, 4 % Ficoll® 400, 4 % LDS, 0.025 % phenol red and 0.025 % bromophenol.

Cat.No.	Size
42525.01	10 ml

SERVA Tris-Glycine/SDS Electrophoresis Buffer (10x)

HS 38220000

Running buffer for SDS PAGE. Supplied as 10 x concentrate.
Contains 250 mM Tris, 1.92 M glycine, 1 % SDS.

Cat.No.	Size
42529.01	1 L

SERVA Tris-Glycine/SDS Sample Buffer (2x)

(Tris-Glycine/SDS Sample Buffer)
HS 38220000
Storage temperature +2 °C to +8 °C

Sample buffer for SDS PAGE. Supplied as 2 x concentrate.
Contains 126 mM Tris/HCl (pH 6.8), 20 % glycerol, 4 % SDS and 0.02 % bromophenol blue.

Cat.No.	Size
42527.01	20 ml

SERVA Tris-SDS Sample Buffer pH 8.6 (10X)

WARNING
H315 - H319 ♦ HS 38220000
HS 38220000
Storage temperature +2 °C to +8 °C

Non-reducing sample buffer for SDS PAGE, delivered as 10x concentrate. Ideal for diluted samples. Due to the basic pH the sample buffer can be used for labelling of proteins with e.g. Lightning Red or DIGE dyes prior to electrophoresis.
For reducing conditions the sample buffer may be supplemented with 10 mM DTT or 5 % β-mercaptoethanol (end concentration 1x sample buffer).
Contains: 290 mM Tris, 210 mM Tris-HCl, 25 % glycerol, 10 % SDS and 0.1 % bromophenol

Cat.No.	Size
42546.01	10 ml

SERVA Tris-Tricine/SDS Electrophoresis Buffer (10x)

HS 38220000

Running buffer for SDS PAGE. Supplied as 10 x concentrate.
Contains 1 M Tris, 1 M Tricine and 1 % SDS.

Cat.No.	Size
42552.01	1 L

SERVA Tris-Tricine/SDS Electrophoresis Buffer (20x)

HS 38220000

Running buffer for SDS PAGE. Optimized formulation to improve sharpness of bands, especially when used together with SERVA*Gel* Neutral pH 7.4 (cat. no. 43220 and 43221) precast gels. Supplied as 20 x concentrate. Contains 1.2 M Tris (pH 8.5), 0.8 M Tricine and 2 % SDS.

Cat.No.	Size
42560.01	1 L

SERVA Tris-Tricine/SDS Sample Buffer (2x)

HS 38220000
Storage temperature +2 °C to +8 °C

Sample buffer for SDS PAGE. Supplied as 2 x concentrate.
Contains 900 mM Tris/HCl (pH 8.45), 24 % glycerol , 4 % SDS, 0.015 % SERVA Blue G and 0.005 % phenol red.

Cat.No.	Size
42551.01	20 ml

SERVA Unstained Protein Standard 6.5 - 97 kDa

HS 38220000
Storage temperature -15 °C to -25 °C

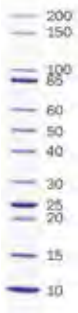
Ready-to-use protein marker that contains 7 native proteins ranging from 6.5 to 97.4 kDa.
After gently warming the protein standard solution to room temperature, apply 5 µl per lane when staining with SERVA Blue G, SERVA Blue R or Coomassie®. For silver staining, e.g. using SERVA's Silver Staining Kit (cat.no. 35076), dilute 1:5 in 1x Laemmli Buffer and apply 5 µl.

Phosphorylase B	Mr 97 400
Albumin bovine (BSA)	Mr 67 000
Ovalbumin	Mr 45 000
Carbonic anhydrase	Mr 29 000
Trypsin inhibitor (soybean)	Mr 21 000
Cytochrom C	Mr 12 500
Trypsin inhibitor (bovine)	Mr 6 500

Cat.No.	Size
39214.01	500 µl

SERVA Unstained Protein Standard IV

HS 38220000
Storage temperature -15 °C to -25 °C



SERVA Unstained Protein Standard IV is a mixture of 12 unstained recombinant proteins of a molecular weight range from 10 to 200 kDa (separation on a SDS Tris-glycine gel). The 25 kDa and 85 kDa bands have double intensity for easy allocation of protein molecular weights. It is provided in a ready-to-use formula and no heating, further dilution or adding of reducing reagents is necessary before use. SERVA Unstained Protein Standard IV is designed for molecular weight determination in SDS PAGE and verification of Western Blotting transfer efficiency.

The marker is stable for up to two weeks at 25 °C and for up to 3 months at 4 °C. Recommended loading volume for a mini gel is 5 µl/lane.

Cat.No.	Size
39250.01	500 µl

SERVA UV-Table CI 254 nm, 22 x 28 cm

HS 90278017

UV table with wavelength of 254 nm and filter size of 22 x 28 cm. Suitable for digital image analysis. Stainless steel filter frame and robust steel housing. Homogeneous UV light for uniform illumination of samples and high UV intensity due to the use of reflectors made of refined aluminium.

Cat.No.	Size
UV-CI	1 piece

SERVA UV-Table C II 312 nm, 22 x 28 cm, w. Lid for DIAS-II

HS 90278017

UV table with wavelength of 312 nm and filter size of 22 x 28 cm. Suitable for digital image analysis, preparation of nucleic acids and other daily routine work. Stainless steel filter frame and robust steel housing. Homogeneous UV light for uniform illumination of samples and high UV intensity due to the use of reflectors made of refined aluminium. Applicable as a white or blue light table in combination with the UV/WL or UV/BL converter screen (cat. nos. UV-WLC, UV-BLC). The removable adjustable UV protection shield is adapted to the special needs when used in combination with the SERVA Digital Imaging and Analysis System III (DIAS-III).

Cat.No.	Size
UV-CII	1 piece

SERVA UV-Table CIIL

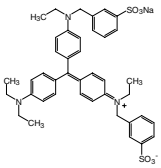
HS 90278017

UV table with wavelength of 312 nm and filter size of 22 x 28 cm. Suitable for digital image analysis, preparation of nucleic acids and other daily routine work. Stainless steel filter frame and robust steel housing. Homogeneous UV light for uniform illumination of samples and high UV intensity due to the use of reflectors made of refined aluminium. The lid serves as removable adjustable UV protection shield. Applicable as a white or blue light table in combination with the UV/WL or UV/BL converter screen (cat. nos. UV-WLC, UV-BLC).

Cat.No.	Size
UV-CIIL	1 piece

SERVA Violet 17

(Acid Violet 17; COOMASSIE® Violet R-150)
C.I.42650 ♦ $C_{41}H_{44}N_3O_6S_2$·Na ♦ M_r 761.9 ♦
CAS [4129-84-4]



H411 ♦ #i#GGVSE/ADR 9 III UN3077 ♦
IATA 9 III UN3077 ♦ EINECS 223-942-6 ♦ WGK 3L ♦
HS 32041200

For staining of proteins in PAGE.

λ max. (0.001 % in water)	544 - 550 nm
A 1 cm/λ max./0.001 % in water	min. 0.8
Water (KF)	max. 10.0 %

COOMASSIE = TM of ICI Ltd.

Cat.No.	Size
35072.01	5 g
35072.02	25 g
35072.03	100 g

SERVA Violet 17 Staining Kit

DANGER
H314-H411 ♦ GGVSE/ADR 8 III UN1805 ♦ IATA 8 III UN1805 ♦ HS 38220000

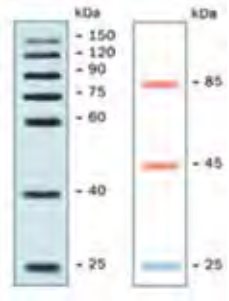
The SERVA Violet 17 Staining Kit is suited to stain all vertical and horizontal gels after isoelectric focusing (IEF). The kit is convenient, safe and easy to use and contains everything needed for fixation, staining and destaining. The colloidal stain SERVA Violet 17 gives you high sensitivity when staining IEF gels. No organic solvents are needed to apply SERVA Violet 17 staining. The SERVA Violet 17 Staining Kit contains 1 g SERVA Violet 17 and 500 ml stain solubilizer solution, ready-to-use solutions for fixation (2 x 500 ml) and destaining (500 ml) and a detailed protocol for the detection procedure. The kit contains enough stain and solutions for 5 to 10 applications (large/small gels).

Cat.No.	Size
35074.01	1 kit

SERVA VisiBlot Standard I

HS 38220000
Storage temperature -15 °C to -25 °C

VisiBlot Standard I is a mixture of 10 recombinant proteins of a molecular weight range from 25 kDa to 150 kDa. Protein bands of 25 kDa, 45 kDa and 85 kDa are prestained allowing monitoring of protein separation during SDS PAGE. The remaining five proteins contain several IgG binding sites. Hence marker proteins bind to primary or secondary antibodies used in Western Blotting facilitating easy marker visualization on the transfer membrane. Because the proteins have no chromophore attached, the marker enables accurate molecular weight estimation.
Recommended loading volume for a mini gel is 5 µl/lane.



- Ready-to-use, no reconstitution, further dilution or heating required
- Prestained bands for monitoring electrophoresis and membrane transfer
- Visualization of marker proteins on Western Blots by horseradish peroxidase or alkaline phosphatase-based immune-detection methods
- Molecular weight determination of proteins detected on transfer membrane

Cat.No.	Size
39260.01	500 µl

SERVA White Light Table 22 x 28 cm

HS 90278017

White light table with filter size of 22 x 28 cm. Suitable for digital image analysis and other daily routine work. Stainless steel filter frame and robust steel housing.

Cat.No.	Size
WL-28	1 piece

SERVAColor BCIP/NBT Blot Solution

HS 38220000
Storage temperature +2 °C to +8 °C

Ready-to-use, non-toxic, highly sensitive substrate solution for detection of alkaline phosphatase (AP) in membrane assays. Forms dark purple precipitates at the sites of AP activity on membranes.

- Rapid precipitate formation due to high activity
- High contrast due to very low background
- Long term stability at room temperature
- No significant fading after reaction stop

Cat.No.	Size
15245.01	250 ml

SERVAColor TMB Blot Solution

HS 38220000
Storage temperature +2 °C to +8 °C

Ready-to-use, non-toxic, highly sensitive substrate solution for detection of horseradish peroxidase (HRP) in membrane assays. Forms dark blue precipitates at the sites of HRP activity on membranes.

- Rapid precipitate formation due to high activity
- High contrast due to very low background
- Long term stability at room temperature
- No significant fading after reaction stop

Cat.No.	Size
37071.01	100 ml
37071.02	250 ml

SERVA*Gel*™ TG PRiME™ 8 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 8 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 40 up to 250 kDa.

Cat.No.	Size
43261.03	2 gels
43261.01	10 gels

SERVA*Gel*™ TG PRiME™ 8 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 8 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 40 up to 250 kDa.

Cat.No.	Size
43260.03	2 gels
43260.01	10 gels

SERVA*Gel*™ TG PRiME™ 8 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 8 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 40 up to 250 kDa.

Cat.No.	Size
43284.03	2 gels
43284.01	10 gels

SERVA*Gel*™ TG PRiME™ 10 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 10 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 30 up to 200 kDa.

Cat.No.	Size
43264.03	2 gels
43264.01	10 gels

SERVA*Gel*™ TG PRiME™ 10 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 10 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 30 up to 200 kDa.

Cat.No.	Size
43263.03	2 gels
43263.01	10 gels

SERVA*Gel*™ TG PRiME™ 10 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 10 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 30 up to 200 kDa.

Cat.No.	Size
43285.03	2 gels
43285.01	10 gels

SERVA*Gel*™ TG PRiME™ 12 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 20 up to 150 kDa.

Cat.No.	Size
43267.03	2 gels
43267.01	10 gels

SERVA*Gel*™ TG PRiME™ 12 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 20 up to 150 kDa.

Cat.No.	Size
43266.03	2 gels
43266.01	10 gels

SERVA*Gel*™ TG PRiME™ 12 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 20 up to 150 kDa.

Cat.No.	Size
43286.03	2 gels
43286.01	10 gels

SERVA*Gel*™ TG PRiME™ 12 % precast gel, 2D well

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVA*Gel*™ TG PRiME™ 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system. The 2D gel has one very planar slot for optimum transfer of proteins in the second dimension. For the first dimension IPG strips of 7 cm length can be used. The separation distance is 7 cm.

Cat.No.	Size
43268.03	2 gels
43268.01	10 gels

SERVAGel™ TG PRiME™ 14 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVAGel™ TG PRiME™ 14 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 10 up to 100 kDa.

Cat.No.	Size
43270.03	2 gels
43270.01	10 gels

SERVAGel™ TG PRiME™ 14 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVAGel™ TG PRiME™ 14 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 10 up to 100 kDa.

Cat.No.	Size
43269.03	2 gels
43269.01	10 gels

SERVAGel™ TG PRiME™ 14 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVAGel™ TG PRiME™ 14 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 250 V const.). It can be operated under native and denaturing conditions. The separation range is from 10 up to 100 kDa.

Cat.No.	Size
43287.03	2 gels
43287.01	10 gels

SERVAGel™ TG PRiME™ 14 % precast gel, 2D well

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, the precast gel SERVAGel™ TG PRiME™ 14 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system. The 2D gel has one very planar slot for optimum transfer of proteins in the second dimension. For the first dimension IPG strips of 7 cm length can be used. The separation distance is 7 cm.

Cat.No.	Size
43271.03	2 gels
43271.01	10 gels

SERVAGel™ TG PRiME™ 4 - 12 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 4 - 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 30 up to 300 kDa.

Cat.No.	Size
43274.03	2 gels
43274.01	10 gels

SERVAGel™ TG PRiME™ 4 - 12 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 4 - 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 30 up to 300 kDa.

Cat.No.	Size
43273.03	2 gels
43273.01	10 gels

SERVAGel™ TG PRiME™ 4 - 12 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 4 - 12 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 30 up to 300 kDa.

Cat.No.	Size
43288.03	2 gels
43288.01	10 gels

SERVAGel™ TG PRiME™ 4 - 20 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 4 - 20 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 6 up to 200 kDa.

Cat.No.	Size
43277.03	2 gels
43277.01	10 gels

SERVAGel™ TG PRiME™ 4 - 20 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 4 - 20 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 6 up to 200 kDa.

Cat.No.	Size
43276.03	2 gels
43276.01	10 gels

SERVAGel™ TG PRiME™ 4 - 20 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 4 - 20 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 6 up to 200 kDa.

Cat.No.	Size
43289.03	2 gels
43289.01	10 gels

SERVAGel™ TG PRiME™ 8 - 16 % precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 8 - 16 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 20 up to 250 kDa.

Cat.No.	Size
43280.03	2 gels
43280.01	10 gels

SERVAGel™ TG PRiME™ 8 - 16 % precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVAGel™ TG PRiME™ 8 - 16 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 20 up to 250 kDa.

Cat.No.	Size
43279.03	2 gels
43279.01	10 gels

SERVA*Gel*™ TG PRiME™ 8- 16 % precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVA*Gel*™ TG PRiME™ 8 - 16 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system (2 gels, 35 min at 350 V const.). It can be operated under native and denaturing conditions. The separation range is from 20 up to 250 kDa

Cat.No.	Size
43290.03	2 gels
43290.01	10 gels

SERVA*Gel*™ TG PRiME™ 8 - 16 % precast gel, 2D well

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Obtained from proprietary development, SERVA*Gel*™ TG PRiME™ 8 -16 % features an extended shelf life and short electrophoresis times by using a standard Tris/glycine buffer system. The 2D gel has one very planar slot for optimum transfer of proteins in the second dimension. For the first dimension IPG strips of 7 cm length can be used. The separation distance is 7 cm.

Cat.No.	Size
43281.03	2 gels
43281.01	10 gels

SERVA*Gel*™ Neutral HSE precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral HSE is a specially for High Speed Electrophoresis developed version of the SERVA*Gel*™ Neutral pH 7.4 Gradient (cat. no. 43223). With the standard SDS-Tris-glycine buffer system (Laemmli) it can be operated at 400 V, which reduces the electrophoresis time to 20 min.
The separation range is from 6.5 up to 200 kDa.
Obtained from proprietary development, the SERVA*Gel*™ Neutral HSE features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43246.03	2 gels
43246.01	10 gels

SERVA*Gel*™ Neutral HSE precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral HSE is a specially for High Speed Electrophoresis developed version of the SERVA*Gel*™ Neutral pH 7.4 Gradient (cat. no. 43221). With the standard SDS-Tris-glycine buffer system (Laemmli) it can be operated at 400 V, which reduces the electrophoresis time to 20 min.
The separation range is from 6.5 up to 200 kDa.
Obtained from proprietary development, the SERVA*Gel*™ Neutral HSE features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43245.03	2 gels
43245.01	10 gels

SERVA*Gel*™ Neutral HSE precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral HSE is a specially for High Speed Electrophoresis developed version of the SERVA*Gel*™ Neutral pH 7.4 Gradient (cat. no. 43223). With the standard SDS-Tris-glycine buffer system (Laemmli) it can be operated at 400 V, which reduces the electrophoresis time to 20 min.
The separation range is from 6.5 up to 200 kDa.
Obtained from proprietary development, the SERVA*Gel*™ Neutral HSE features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43249.03	2 gels
43249.01	10 gels

SERVA*Gel*™ Neutral HSE, 2D precast gel, 2D well

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral HSE, 2D well is a specially for High Speed Electrophoresis developed version of the SERVA*Gel*™ Neutral pH 7.4 Gradient. With the standard SDS-Tris-glycine buffer system (Laemmli) two 2D gels can be operated at 300 V, which reduces the electrophoresis time to 40 min.
For the first dimension IPG strips of 7 cm length can be used. The separation distance is 7 cm.
Obtained from proprietary development, the SERVA*Gel*™ Neutral HSE features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43247.03	2 gels
43247.01	10 gels

SERVA*Gel*™ Neutral pH 7.4 precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral pH 7.4 can be operated with various buffer systems such as Tris-glycine, MOPS-Tris, Tris-Tricine. The separation range is from 6.5 up to 200 kDa.
Obtained from proprietary development, the SERVA*Gel*™ Neutral pH 7.4 features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43222.03	2 gels
43222.01	10 gels

SERVA*Gel*™ Neutral pH 7.4 precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral pH 7.4 can be operated with various buffer systems such as Tris-glycine, MOPS-Tris, Tris-Tricine. The separation range is from 6.5 up to 200 kDa.
Obtained from proprietary development, the SERVA*Gel*™ Neutral pH 7.4 features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43220.03	2 gels
43220.01	10 gels

SERVA*Gel*™ Neutral pH 7.4 precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral pH 7.4 can be operated with various buffer systems such as Tris-glycine, MOPS-Tris, Tris-Tricine. The separation range is from 6.5 up to 200 kDa.
Obtained from proprietary development, the SERVA*Gel*™ Neutral pH 7.4 features extended shelf life due to its neutral buffer system.

Cat.No.	Size
43256.03	2 gels
43256.01	10 gels

SERVA*Gel*™ Neutral pH 7.4 Gradient

precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ Neutral pH 7.4 Gradient has all advantages of the SERVA*Gel*™ Neutral pH 7.4 (cat. no. 43222) but shows even better resolution performance for proteins of low molecular weight (from 5 kDa up to approx. 100 kDa), separation range is from 5 kDa up to 200 kDa.
To improve resolution and sharpness of protein bands gels should be run using SERVA Tris-Tricine/SDS Running Buffer (cat. no. 42552), samples should be dissolved in Tris-Tricine/SDS Sample Buffer (cat. no. 42551).

Cat.No.	Size
43223.03	2 gels
43223.01	10 gels

SERVAGel™ Neutral pH 7.4 Gradient
precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ Neutral pH 7.4 Gradient has all advantages of the SERVAGel™ Neutral pH 7.4 (cat. no. 43220) but shows even better resolution performance for proteins of low molecular weight (from 5 kDa up to approx. 100 kDa), separation range is from 5 kDa up to 200 kDa.
To improve resolution and sharpness of protein bands gels should be run using SERVA Tris-Tricine/SDS Running Buffer (cat. no. 42552), samples should be dissolved in Tris-Tricine/SDS Sample Buffer (cat. no. 42551).

Cat.No.	Size
43221.03	2 gels
43221.01	10 gels

SERVAGel™ Neutral pH 7.4 Gradient
precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ Neutral pH 7.4 Gradient has all advantages of the SERVAGel™ Neutral pH 7.4 (cat. no. 43222) but shows even better resolution performance for proteins of low molecular weight (from 5 kDa up to approx. 100 kDa), separation range is from 5 kDa up to 200 kDa.
To improve resolution and sharpness of protein bands gels should be run using SERVA Tris-Tricine/SDS Running Buffer (cat. no. 42552), samples should be dissolved in Tris-Tricine/SDS Sample Buffer (cat. no. 42551).

Cat.No.	Size
43257.03	2 gels
43257.01	10 gels

SERVAGel™ N 3 - 12, Vertical Native Gel 3 - 12 %
precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ N 3 - 12 can be operated with the Blue and Clear Native buffer systems. Also included in the SERVAGel™ N Native Starter Kit (cat. no. 43204) containing buffers and reagents for Blue and Clear Native gel electrophoresis.

Cat.No.	Size
43251.03	2 gels
43251.01	10 gels

SERVAGel™ N 3 - 12, Vertical Native Gel 3 - 12 %
precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ N 3 - 12 can be operated with the Blue and Clear Native buffer systems. Also included in the SERVAGel™ N Native Starter Kit (cat. no. 43204) containing buffers and reagents for Blue and Clear Native gel electrophoresis.

Cat.No.	Size
43250.03	2 gels
43250.01	10 gels

SERVAGel™ N 3 - 12, Vertical Native Gel 3 - 12 %
precat gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ N 3 - 12 can be operated with the Blue and Clear Native buffer systems. Also included in the SERVAGel™ N Native Starter Kit (cat. no. 43204) containing buffers and reagents for Blue and Clear Native gel electrophoresis.

Cat.No.	Size
43254.03	2 gels
43254.01	10 gels

SERVAGel™ N 4 - 16, Vertical Native Gel 4 - 16 %
precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ N 4 - 16 can be operated with the Blue and Clear Native buffer systems. Also included in the SERVAGel™ N Native Starter Kit (cat. no. 43204) containing buffers and reagents for Blue and Clear Native gel electrophoresis.

Cat.No.	Size
43252.03	2 gels
43252.01	10 gels

SERVAGel™ N 4 - 16, Vertical Native Gel 4 - 16 %
precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ N 4 - 16 can be operated with the Blue and Clear Native buffer systems. Also included in the SERVAGel™ N Native Starter Kit (cat. no. 43204) containing buffers and reagents for Blue and Clear Native gel electrophoresis.

Cat.No.	Size
43253.03	2 gels
43253.01	10 gels

SERVAGel™ N 4 - 16, Vertical Native Gel 4 - 16 %
precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ N 4 - 16 can be operated with the Blue and Clear Native buffer systems. Also included in the SERVAGel™ N Native Starter Kit (cat. no. 43204) containing buffers and reagents for Blue and Clear Native gel electrophoresis.

Cat.No.	Size
43255.03	2 gels
43255.01	10 gels

SERVAGel™ N Native Starter Kit

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The SERVAGel™ N gels were developed for native gel electrophoresis. The gels can be operated in Blue and Clear Native buffer systems. Due to their neutral buffer system, the SERVAGel™ N gels feature extended shelf life.

Contains:
2 precast gels SERVAGel™ N 3 - 12, Vertical Native Gels 3 - 12 %
2 precast gels SERVAGel™ N 4 - 16, Vertical Native Gels 4 - 16 %
250 ml 10x Native Anode Buffer for BN/CN (cat. no. 42535)
250 ml 10x Native Cathode Buffer for BN/CN (cat. no. 42536)
50 µl SERVA Native Marker Liquid Mix for BN/CN (cat. no. 39219)
2 ml Sample Buffer for Blue Native (2x) (cat. no. 42533)
2 ml Sample Buffer for Clear Native (2x) (cat. no. 42534)
5 ml SERVA Blue G Solution for BN, 1 % (cat. no. 42538)

Cat.No.	Size
43204.01	1 kit

SERVAGel™ IEF 3 - 10 precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVAGel™ IEF 3 - 10 is suitable for isoelectric focusing (IEF) in a pH range of 3 to 8.5 (Standard IEF) and 5.5 to 11 (non-equilibrium pH gradient electrophoresis, NEPHGE). For NEPHGE you change cathode and anode buffer as well as polarity of the electrophoresis chamber. In contrast to standard IEF, samples are loaded anodic, which enables an optimal separation of basic to very basic proteins.

Cat.No.	Size
43242.03	2 gels
43242.01	10 gels

SERVA*Gel*™ IEF 3 - 10 precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ IEF 3 - 10 is suitable for isoelectric focusing (IEF) in a pH range of 3 to 8.5 (Standard IEF) and 5.5 to 11 (non-equilibrium pH gradient electrophoresis, NEPHGE). For NEPHGE you change cathode and anode buffer as well as polarity of the electrophoresis chamber. In contrast to standard IEF, samples are loaded anodic, which enables an optimal separation of basic to very basic proteins.

Cat.No.	Size
43240.03	2 gels
43240.01	10 gels

SERVA*Gel*™ IEF 3 - 10 precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The precast gel SERVA*Gel*™ IEF 3 - 10 is suitable for isoelectric focusing (IEF) in a pH range of 3 to 8.5 (Standard IEF) and 5.5 to 11 (non-equilibrium pH gradient electrophoresis, NEPHGE). For NEPHGE you change cathode and anode buffer as well as polarity of the electrophoresis chamber. In contrast to standard IEF, samples are loaded anodic, which enables an optimal separation of basic to very basic proteins.

Cat.No.	Size
43239.03	2 gels
43239.01	10 gels

SERVA*Gel*™ IEF 4 - 7 precast gel, 10 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The SERVA*Gel*™ IEF 4 - 7 can be operated under native or denaturing conditions. The concentration of the acrylamide matrix is 5 % T, 3 %C, SERVALYT™ content is approx. 3 %.

Cat.No.	Size
43243.03	2 gels
43243.01	10 gels

SERVA*Gel*™ IEF 4 - 7 precast gel, 12 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C

The SERVA*Gel*™ IEF 4 - 7 can be operated under native or denaturing conditions. The concentration of the acrylamide matrix is 5 % T, 3 %C, SERVALYT™ content is approx. 3 %.

Cat.No.	Size
43241.03	2 gels
43241.01	10 gels

SERVA*Gel*™ IEF 4 - 7 precast gel, 15 sample wells

HS 38220000
Storage temperature +2 °C to +8 °C ✻

The SERVA*Gel*™ IEF 4 - 7 can be operated under native or denaturing conditions. The concentration of the acrylamide matrix is 5 % T, 3 %C, SERVALYT™ content is approx. 3 %.

Cat.No.	Size
43244.03	2 gels
43244.01	10 gels

SERVA*Gel*™ IEF Starter Kit

HS 38220000
Storage temperature +2 °C to +8 °C ✻

Contains:
4 SERVA*Gel*™ IEF precast gels of your choice (cat. no. 43240 or 43242)
SERVA IEF Anode Buffer (1x, powder for 2.5 L buffer, cat. no. 42539)
SERVA IEF Cathode Buffer 3-10 (10x, powder for 100 ml buffer, cat. no. 42539)
IEF Sample Buffer (2x 1 ml, cat. no. 42537)
SERVA Violet 17 (0.5 g, cat. no. 35072)
SERVA IEF Marker 3-10, Liquid Mix (30 µl, cat. no. 39212)

Cat.No.	Size
43205.01	1 kit

SERVA*Gel*™ IEF Running Buffer Kit

HS 38220000
Storage temperature +2 °C to +8 °C

Running Buffer Kit for SERVA*Gel*™ IEF 3 - 10.
Contains:
SERVA IEF Anode Buffer (1x, powder for 5 L buffer)
SERVA IEF Cathode Buffer 3 -1 0 (10x, powder for 200 ml buffer)

Cat.No.	Size
42539.01	1 kit

SERVA*Light* Polaris CL HRP WB Substrate Kit

HS 38220000
Storage temperature +2 °C to +8 °C

Highly sensitive enhanced chemiluminescence kit for the detection of immobilized proteins (Western Blot) or immobilized nucleic acids (Southern and Northern Blot) labelled directly with Horseradish Peroxidase (HRP) or indirectly with HRP-labelled antibodies/streptavidin.
The substrate is readily prepared by mixing component A (luminol/enhancer solution) with component B (stabilized peroxide solution) in a one-to-one ratio. 0.1 ml substrate is sufficient for one cm² membrane.

- High sensitivity, low picogram limit of detection
- Long light emission for 6 hours
- Primary antibody dilution 1:1000 -1:5000
- Secondary antibody dilution 1:20.000 – 1:100.000
- Detection can be done by film or CCD imaging equipment

Cat.No.	Size
42584.01	100 ml
42584.02	250 ml
42584.03	500 ml

SERVA*Light* Eos CL HRP WB Substrate Kit

HS 38220000
Storage temperature +2 °C to +8 °C

Very highly sensitive enhanced chemiluminescence kit for the detection of immobilized proteins (Western Blot) or immobilized nucleic acids (Southern and Northern Blot) labelled directly with Horseradish Peroxidase (HRP) or indirectly with HRP-labelled antibodies/streptavidin.
The substrate is readily prepared by mixing component A (luminol/enhancer solution) with component B (stabilized peroxide solution) in a one-to-one ratio. 0.1 ml substrate is sufficient for one cm² membrane.

- Very high sensitivity, mid femtogram limit of detection
- Very long and steady light emission for 12 hours
- Primary antibody dilution 1:1000 -1:15.000
- Secondary antibody dilution 1:25.000 – 1:150.000
- Detection can be done by film or CCD imaging equipment

Cat.No.	Size
42585.01	50 ml
42585.02	250 ml

SERVA*Light* EosUltra CL HRP WB Substrate Kit

HS 38220000
Storage temperature +2 °C to +8 °C

Ultrahigh sensitive enhanced chemiluminescence kit for the detection of immobilized proteins (Western Blot) or immobilized nucleic acids (Southern and Northern Blot) labelled directly with Horseradish Peroxidase (HRP) or indirectly with HRP-labelled antibodies/streptavidin.
The substrate is readily prepared by mixing component A (luminol/enhancer solution) with component B (stabilized peroxide solution) in a one-to-one ratio. 0.1 ml substrate is sufficient for one cm² membrane.
SERVA*Light* EosUltra substrate is optimized for maximum length of light emission and therefore ideal for detection by CCD imaging systems.

- Ultrahigh sensitivity, mid to low femtogram limit of detection
- Extremely long light emission at a very high signal level for 18 hours
- Primary antibody dilution 1:5000 -1:50.000
- Secondary antibody dilution 1:50.000 – 1:250.000
- Detection can be done preferably by CCD imaging equipment or film

Cat.No.	Size
42586.01	20 ml
42586.02	100 ml

SERVA*Light* Helios CL HRP WB Substrate Kit

HS 38220000
Storage temperature +2 °C to +8 °C

Extremely sensitive enhanced chemiluminescence kit for the detection of immobilized proteins (Western Blot) or immobilized nucleic acids (Southern and Northern Blot) labelled directly with Horseradish Peroxidase (HRP) or indirectly with HRP-labelled antibodies/streptavidin.
The substrate is readily prepared by mixing component A (luminol/enhancer solution) with component B (stabilized peroxide solution) in a one-to-one ratio. 0.1 ml substrate is sufficient for one cm² membrane.
Due to the extremely high light output of the SERVA*Light* Helios substrate very short exposure times or very high dilution of antibodies can be used. Especially when using film detection this is critical to receive optimal performance.

- Extreme sensitivity, low femtogram limit of detection
- Long light emission for 8 hours
- Primary antibody dilution 1:5000 -1:100.000
- Secondary antibody dilution 1:100.000 – 1:500.000
- Detection can be done preferably by CCD imaging equipment or film

Cat.No.	Size
42587.01	20 ml
42587.02	100 ml
42587.03	200 ml

SERVA*Light* Vega CL HRP WB Substrate Kit

HS 38220000
Storage temperature +2 °C to +8 °C

Highly sensitive enhanced chemiluminescence kit for the detection of immobilized proteins (Western Blot) or immobilized nucleic acids (Southern and Northern Blot) labelled directly with Horseradish Peroxidase (HRP) or indirectly with HRP-labelled antibodies/streptavidin. The substrate is readily prepared by mixing component A (luminol/enhancer solution) with component B (stabilized peroxide solution) in a one-to-one ratio. 0.1 ml substrate is sufficient for one cm² membrane.

- High sensitivity, mid picogram limit of detection
- Directly compatible with protocols of standard ECL WB substrates of other vendors
- Low background, high signal/noise ratio
- Working solution is stable for minimum 5 days – reproducible results, less waste
- Primary antibody dilution 1:100 -1:5000
- Secondary antibody dilution 1:1000 – 1:15.000
- Detection can be done by film or CCD imaging equipment

Cat.No.	Size
42588.02	250 ml
42588.03	500 ml

SERVALYT™ 2-4

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42902.01	10 ml
42902.02	25 ml

SERVALYT™ 2-9 Seed-Mix

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Special quality for seed analysis by IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42935.01	10 ml
42935.02	25 ml
42935.03	100 ml

SERVALYT™ 2-11

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42900.01	10 ml
42900.02	25 ml

SERVALYT™ 3-4

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42922.01	10 ml
42922.02	25 ml

SERVALYT™ 3-5

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42903.04	2 ml
42903.01	10 ml
42903.02	25 ml

SERVALYT™ 3-6

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42944.04	2 ml
42944.01	10 ml
42944.02	25 ml

SERVALYT™ 3-7

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42945.01	10 ml
42945.02	25 ml

SERVALYT™ 3-10

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42940.04	2 ml
42940.01	10 ml
42940.02	25 ml

SERVALYT™ 3-10 Iso-Dalt, for 2D Electrophoresis

HS 38220000
Storage temperature +2 °C to +8 °C

Iso-Dalt quality; special 2D grade to be used in 2D electrophoresis.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42951.04	2 ml
42951.01	10 ml
42951.02	25 ml

SERVALYT™ 4-5

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42923.01	10 ml
42923.02	25 ml

SERVALYT™ 4-6

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42904.04	2 ml
42904.01	10 ml
42904.02	25 ml

SERVALYT™ 4-7

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42948.04	2 ml
42948.01	10 ml
42948.02	25 ml

SERVALYT™ 4.2-4.9

HS 38220000
Storage temperature +2 °C to +8 °C

Besides general use in IEF suitable for phenotyping of alpha-1-antitrypsin by hybrid IEF. This is used for diagnosis of alpha-1-antitrypsin deficiency.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42926.01	10 ml
42926.02	25 ml

SERVALYT™ 4-9 T

HS 38220000
Storage temperature +2 °C to +8 °C

Technical grade quality for preparative work. Formation of solid particle (quart. ammonium salts) can be found over time of storage at low temperature. This will not affect the separation as precipitate will dissolve upon dilution (working solution) or warming up to room temperature.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42910.01	10 ml
42910.02	25 ml
42910.03	100 ml

SERVALYT™ 5-6

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42924.01	10 ml
42924.02	25 ml

SERVALYT™ 5-7

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42905.04	2 ml
42905.01	10 ml
42905.02	25 ml

SERVALYT™ 5-8

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42949.04	2 ml
42949.01	10 ml
42949.02	25 ml

SERVALYT™ 5-9

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.
42950.01
42950.02

SERVALYT™ 6-7

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42925.01	10 ml
42925.02	25 ml

SERVALYT™ 6-8

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42906.04	2 ml
42906.01	10 ml
42906.02	25 ml

SERVALYT™ 6-9

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42913.04	2 ml
42913.01	10 ml
42913.02	25 ml

SERVALYT™ 7-9

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42907.04	2 ml
42907.01	10 ml
42907.02	25 ml

SERVALYT™ 8-10

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42911.01	10 ml
42911.02	25 ml

SERVALYT™ 9-11

HS 38220000
Storage temperature +2 °C to +8 °C

SERVALYT™ Carrier Ampholytes (40 % w/v in water). Standard quality (analytical grade) for general use in IEF.

SERVALYT is a trademark of SERVA.

Cat.No.	Size
42909.01	10 ml
42909.02	25 ml

SERVALYT™ PRECOTES™ Wide Range pH 3-10

(Precast Gels for IEF; PRECOTES™)

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 150 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42965.03	5 gels

SERVALYT™ PRECOTES™ Wide Range pH 3-10

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 150 µm; size 245 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42967.02	5 gels

SERVALYT™ PRECOTES™ Wide Range pH 3-10

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 300 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42866.02	5 gels

SERVALYT™ PRECOTES™ Wide Range pH 3-10

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 300 µm; size 245 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42867.02	5 gels

SERVALYT™ PRECOTES™ Range pH 3-6

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 150 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42974.02	5 gels

SERVALYT™ PRECOTES™ Range pH 3-6

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 150 µm; size 245 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42919.03	5 gels

SERVALYT™ PRECOTES™ Range pH 3-6

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 300 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42874.02	5 gels

SERVALYT™ PRECOTES™ Range pH 4-6

DANGER
H340-H350-H361F ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 300 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42875.02	5 gels

SERVALYT™ PRECOTES™ Range pH 6-9

DANGER
H340-H350-H361F ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 150 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42978.02	5 gels

SERVALYT™ PRECOTES™ Range pH 6-9

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

PAG Layer 300 µm; size 125 x 125 mm.
Horizontal precast polyacrylamide gels for IEF. The ultra-thin layer guarantees short focusing and staining/destaining times with high resolution and band sharpness. Gels are cast on a stable, inert polyester support film. Therefore they are despite the thin layer easy to handle and protected against mechanical damages like e. g. ripping of the gel matrix. The thin cover sheet (GEL-FIX™ for covers) prevents the surface from drying out and damages.

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42878.02	5 gels

SERVALYT™ PRECOTES™ CSF Kit

DANGER
H340-H350 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

For cerebrospinal fluid (CSF) analysis by isoelectric focusing.
The kit contains:

- 5 SERVALYT™ PRECOTES™ CSF gels 245 x 125 mm, 300 µm
- Anode and cathode buffer solutions
- Applicator strips and electrode wicks
- Optimized protocol for silver staining

SERVALYT PRECOTES is a trademark of SERVA.

Cat.No.	Size
42800.01	1 kit

SERVALYT™ PreNets™ pH 3-10

(PreNets™)
HS 38220000
Storage temperature +2 °C to +8 °C

PAG layer 300 µm, size: 125 x 125 mm.
SERVALYT™ PreNets™ for subsequent blotting. They are precast gels, used in the same manner as the related SERVALYT™ PRECOTES ™ except that the gel, supported by a NetFix™ polyester fabric, is permeable for electrotransfer. The gel layer is not covalently bound to the backing and is lifted off easily.

SERVALYT PreNets is a trademark of SERVA.

Cat.No.	Size
42738.02	5 gels

SERVAPOR® Closure, 45 mm

HS 39173200

Made from polyamide. Specifically designed for leak-free soaking of dialysis membranes. Do not float, autoclavable.

Cat.No.	Size
44608.01	10 pieces

SERVAPOR® Closure, 65 mm

HS 39173200

Made from polyamide. Specifically designed for leak-free soaking of dialysis membranes. Do not float, autoclavable.

Cat.No.	Size
44609.01	10 pieces

SERVAPOR® Closure, 110 mm

HS 39173200

Made from polyamide. Specifically designed for leak-free soaking of dialysis membranes. Do not float, autoclavable.

Cat.No.	Size
44610.01	10 pieces

SERVAPOR® 3 dialysis tubing, MWCO 3500
RC, diameter 16 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C. Delivered with a pair free of charge dialysis membrane closures and manual.

Nominal dry flat width	25 mm
Nominal dry diameter	16 mm
Approx. filling volume	2.0 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44558.01	15 m
44558.02	30 m

SERVAPOR® 3 dialysis tubing, MWCO 3500
RC, diameter 28 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C. Delivered with a pair free of charge dialysis membrane closures and manual.

Nominal dry flat width	44 mm
Nominal dry diameter	28 mm
Approx. filling volume	6.2 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44559.01	15 m
44559.02	30 m

SERVAPOR® 3 dialysis tubing, MWCO 3500
RC, diameter 35 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C. Delivered with a pair free of charge dialysis membrane closures and manual.

Nominal dry flat width	55 mm
Nominal dry diameter	35 mm
Approx. filling volume	9.6 ml/cm
Nominal dry wall thickness	25 µm

Cat.No.	Size
44560.01	15 m

SERVAPOR® 6 dialysis tubing, MWCO 6000 - 8000
RC, diameter 16 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C. Delivered with a pair free of charge dialysis membrane closures and manual.

Nominal dry flat width	25 mm
Nominal dry diameter	16 mm
Approx. filling volume	2.0 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44561.02	30 m

SERVAPOR® 6 dialysis tubing, MWCO 6000 - 8000
RC, diameter 22 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C. Delivered with a pair free of charge dialysis membrane closures and manual.

Nominal dry flat width	34 mm
Nominal dry diameter	22 mm
Approx. filling volume	3.8 ml/cm
Nominal dry wall thickness	23 µm

Cat.No.	Size
44562.02	30 m

SERVAPOR® 6 dialysis tubing, MWCO 6000 - 8000
RC, diameter 28 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C. Delivered with a pair free of charge dialysis membrane closures and manual.

Nominal dry flat width	44 mm
Nominal dry diameter	28 mm
Approx. filling volume	6.2 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44563.02	30 m

SERVAPOR® dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 6 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	approx. 25 Å
Nominal dry flat width	10 mm
Nominal dry diameter	6 mm
Approx. filling volume	0.3 ml/cm
Nominal dry wall thickness	50 µm

Cat.No.	Size
44139.01	5 m
44139.02	25 m

SERVAPOR® dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 16 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	approx. 25 Å
Nominal dry flat width	25 mm
Nominal dry diameter	16 mm
Approx. filling volume	2.0 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44145.01	5 m
44145.04	25 m

SERVAPOR® dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 21 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	approx. 25 Å
Nominal dry flat width	34 mm
Nominal dry diameter	21 mm
Approx. filling volume	3.4 ml/cm
Nominal dry wall thickness	25 µm

Cat.No.	Size
44144.01	5 m
44144.02	25 m

SERVAPOR® dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 29 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	approx. 25 Å
Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.5 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44146.01	5 m
44146.04	25 m

SERVAPOR® dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 50 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	approx. 25 Å
Nominal dry flat width	80 mm
Nominal dry diameter	50 mm
Approx. filling volume	18.5 ml/cm
Nominal dry wall thickness	40 µm

Cat.No.	Size
44148.01	5 m
44148.02	25 m

Silicone anti-foam emulsion, 30 % USP
(30 % Simethicone)
HS 39100000

Dow Corning® 30 % polydimethylsiloxane in water; contains traces of emulsifiers derived from plant.

Cat.No.	Size
35119.01	100 ml
35119.02	500 ml

Silicone DC 200 fluid; 10 cst pract.
WGK 1L ♦ HS 39100000

Dimethyl siloxane polymer (methyl silicones).
In terms of SI-units: 1 cSt = $10^{-6}m^2s^{-1}$
Density (25 °C) 0.934 - 0.940

Cat.No.	Size
35132.01	500 g

Silicone DC 200 fluid; 50 cst pract.
WGK 1L ♦ HS 39100000

Dimethyl siloxane polymer (methyl silicones).
In terms of SI-units: 1 cst = $10^{-6}m^2s^{-1}$
Density (25 °C) 0.957 - 0.963

Cat.No.	Size
35134.01	500 g

Silicone DC 200 fluid; 100 cst pract.
WGK 1L ♦ HS 39100000

Dimethyl siloxane polymer (methyl silicones).
In terms of SI-units: 1 cst = $10^{-6}m^2s^{-1}$
Density (25 °C) 0.962 - 0.968

Cat.No.	Size
35135.01	500 g

Silicone DC 200 fluid; 350 cst pract.
WGK 1L ♦ HS 39100000

Dimethyl siloxane polymer (methyl silicones).
In terms of SI-units: 1 cst = $10^{-6}m^2s^{-1}$
Density (25 °C) 0.966 - 0.972

Cat.No.	Size
35136.01	500 g

Silicone DC 550 fluid; 115 cst pract.
CAS [63148-52-7]

WGK 1L ♦ HS 39100000

(Polyphenylmethyldimethylsiloxane)
In terms of SI-units: 1 cst = $10^{-6}m^2s^{-1}$
(25 % Methyl-75 % phenylsilicone). Excellent thermostability; lubricant; for instrument sterilization.
Density (25 °C) 1.06 - 1.07

Cat.No.	Size
35145.01	500 g

Silicone DC 710 fluid; 500 cst pract.
M_r 2600 ♦ CAS [63148-58-3]

WGK 1L ♦ HS 39100000

(Phenylmethyldimethylsiloxane)
In terms of SI-units: 1 cst = $10^{-6}m^2s^{-1}$
(50 % Methyl-50 % phenylsilicone). For GC, tmax. 225 °. Extremely stable at high temperatures.
Density (25 °C) 1.10 - 1.11

Cat.No.	Size
35149.04	1 kg

Silicone solution SERVA for siliconizing glass and metal
in isopropanol

DANGER
H225-H319-H336 ♦ GGVSE/ADR 3 II UN1219 ♦ IATA 3 II UN1219 ♦ WGK 1 ♦ HS 39100000

Suitable for siliconizing UV quartz cuvettes.

References:
1. J. Biol. Chem. (1995), 270 (52), 30927-32

Cat.No.	Size
35130.01	100 ml
35130.03	250 ml
35130.02	1 L

Silver nitrate analytical grade
$AgNO_3$ ♦ M_r 169.89 ♦ CAS [7761-88-8]

DANGER
H272-H314-H400-H410 ♦ MAK/TRK 0,01E ♦ EG-Index 047-001-00-2 ♦ GGVSE/ADR 5.1 II UN1493 IATA 5.1 II UN1493 ♦ EINECS 231-853-9 ♦ WGK 3L ♦ HS 28342980

Assay min. 99.9 %

Cat.No.	Size
35110.01	25 g
35110.02	100 g

SingleQuant Assay Kit


DANGER
H225-H314 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

Single tube format assay kit for protein quantification. The assay bases on the precipitation of proteins as insoluble dye complexes with acidic, ethanolic amido black 10B solution (1,2). After precipitation the protein-dye complexes are spinned down. The pellet is washed and resolubilized. The thereby released dye amount is measured at 624 nm.

- Precise, reproducible, reliable assay data
- Completed in only 45 min.
- No interference with detergents or reducing agents
- Detection range starts as low as 2 µg protein.

References:
1. Schaffner W., Weissmann C. (1973) Anal. Biochem. ***65:*** 502-514.
2. Popov N., Schmitt M., Schulzeck S., Matthies H. (1975) Acta Biol. Med. Ger. ***34 (9)***: 1441-1446.

Cat.No.	Size
39226.01	200 tests

Skim Milk Powder for blotting

CAS [68514-61-4]

HS 04021011

Skim milk powder is used as a blocking reagent in immunological assays like Western Blotting or ELISA. It is as well suitable for blocking of nitrocellulose filters in cDNA cloning.
It is not suitable for biotin/streptavidin detection systems, because milk contains biotin.

Protein	32.0 - 40.0 %
Fat	max. 1.25 %
Lactose	45.0 - 56.0 %
pH (10 % in water)	6.4 - 6.7
Ash	max. 8.5
Water	max. 4.0 %

References:
1. Johnson, D. A. et al. (1987) Gene Anal. Techn. ***1***, 3 – 8
2. Harlow, E. & Lane, D. (1988) Antibodies: A Laboratory Manual, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York

Cat.No.	Size
42590.01	500 g
42590.02	1 kg
42590.03	5 kg

Sodium-1-naphthyl hydrogen phosphate

see 30130 1-Naphthyl phosphate·Na-salt, page 81

Sodium-L-(+)-ascorbate

see 14033 L-Ascorbic acid·Na-salt, page 15

Sodium-β-glycerophosphate

see 23330 2-Glycerophosphate·Na_2-salt, page 56

Sodium acetate analytical grade

(Acetic acid·Na-salt)
$C_2H_3O_2$·Na ♦ M_r 82.0 ♦ CAS [127-09-3]

EINECS 204-823-8 ♦ WGK 1L ♦ HS 29152900

pKa 25 = 4.76

Assay (titr.)	min. 98.5 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
21249.02	500 g

Sodium acetate buffer pH 5.2, solution 3M molecular biology grade

(Acetic acid·Na-salt)
$C_2H_3O_2$·Na ♦ M_r 82.0 ♦ CAS [127-09-3]

HS 38220000

DNase/RNase not detected.

Composition:

$C_2H_3O_2$·Na (cat. no. 39571)	246.0 g/l

Cat.No.	Size
39572.01	250 ml

Sodium azide research grade

NaN_3 ♦ M_r 65.01 ♦ CAS [26628-22-8]


DANGER
H300-H410 ♦ MAK/TRK 0,2 mg/m³ ♦ EG-Index 011-004-00-7 ♦ GGVSE/ADR 6.1 II UN1687 ♦ IATA 6.1 II UN1687 ♦ EINECS 247-852-1 ♦ WGK 2L ♦ HS 28500060
Sodium azide is commonly used as a bacteriostatic preservative in biochemistry, molecular biology and cell biology.
It is also a metabolic inhibitor of oxidative phosphorylation

Assay (titr.)	min. 99.0 %

Cat.No.	Size
30175.01	100 g
30175.03	250 g
30175.02	1 kg

Sodium bicarbonate research grade, Ph. Eur., USP

(Sodium hydrogen carbonate)
$NaHCO_3$ ♦ M_r 84.0 ♦ CAS [144-55-8]

EINECS 205-633-8 ♦ WGK 1 ♦ HS 28363000

Tested for use in tissue culture. Buffering substance.

Assay (titr.)	99.0 - 100.5 %
pH 5 % in water	7.9 - 8.4
Heavy metals (Pb)	max. 5 ppm

Cat.No.	Size
30180.02	1 kg

Sodium cacodylate

see 15540 Cacodylic acid·Na-salt·$3H_2O$, page 24

Sodium carbonate analytical grade, Ph. Eur.

Na_2CO_3 ♦ M_r 106.0 ♦ CAS [497-19-8]

WARNING
H319 ♦ EG-Index 011-005-00-2 ♦ EINECS 207-838-8 ♦ WGK 1L ♦ HS 28362000

Component in coating buffers for immunoassays and may be used for the removal of peripheral membrane proteins.

Assay (titr.)	99.5 - 100.5 %
Heavy metals (Pb)	max. 50 ppm

Cat.No.	Size
30181.02	1 kg

Sodium chloride cryst. research grade, Ph. Eur., USP

NaCl ♦ M_r 58.44 ♦ CAS [7647-14-5]

EINECS 231-598-3 ♦ WGK 1L ♦ HS 25010099

Assay (titr.)	99.0 - 100.5 %
Heavy metals (Pb)	≤ 5 ppm

Cat.No.	Size
30183.01	1 kg
30183.02	5 kg

Sodium chloride molecular biology grade

NaCl ♦ M_r 4 58.44 ♦ CAS [7647-14-5]

EINECS 231-598-3 ♦ WGK 1L ♦ HS 25010099

DNase/RNase not detected.

Assay (titr.)	99.0 - 100.5 %
Heavy metals (Pb)	≤ 5 ppm

Cat.No.	Size
39781.01	250 g
39781.02	1 kg

Sodium cholate

see 17126 Cholic acid·Na-salt, page 30

Sodium deoxycholate

see 18330 Deoxycholic acid·Na-salt, page 37

Sodium dihydrogen phosphate·2H_2O research grade, Ph. Eur., USP

(Sodium phosphate monobasic (prim. sodium phosphate))
$NaH_2PO_4 \cdot 2H_2O$ ♦ M_r 156.01 ♦ CAS [13472-35-0]

EINECS 231-449-2 ♦ WGK 1L ♦ HS 28352200

Assay (titr.) 98.0 - 100.5 %

Cat.No.	Size
30186.02	1 kg

Sodium dodecyl sulfate

see 20765 Dodecylsulfate·Na-salt in Pellets, page 41

Sodium dodecyl sulfate

see 20760 Dodecylsulfate·Na-salt, page 41

Sodium hydrogen carbonate

see 30180 Sodium bicarbonate, page 136

di-Sodium hydrogen phosphate-2H_2O research grade, Ph. Eur., USP

CAS [10028-24-7]

EINECS 231-448-7 ♦ WGK 1L ♦ HS 28352200

Buffer substance for biochemical, enzymatic and histochemical assays.

Assay (dried basis)	99.0 - 100.5 %
pH 1 % in water	9,0 - 9,6
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
30201.01	500 g
30201.02	1 kg
30201.03	5 kg

di-Sodium hydrogen phosphate·2H_2O analytical grade

(Sodium phosphate dibasic (sec. sodium phosphate))
$Na_2HPO_4 \cdot 2H_2O$ ♦ M_r 177.99 ♦ CAS [10028-24-7]

EINECS 231-448-7 ♦ WGK 1L ♦ HS 28352200

Buffering substance according to Sörensen. Biochemical and enzymatic standard, tested for use in tissue culture.

Assay (titr.)	min. 99.5 %
pH 5 % solution	9.0 - 9.2
Heavy metals (Pb)	max. 10 ppm
Nitrogen (N)	max. 10 ppm

Cat.No.	Size
30200.01	500 g
30200.03	1 kg

di-Sodium hydrogen phosphate·2H_2O molecular biology grade

(Sodium phosphate dibasic (sec. sodium phosphate))
$Na_2HPO_4 \cdot 2H_2O$ ♦ M_r 177.99 ♦ CAS [10028-24-7]

HS 28352200

DNase/RNase not detected. Buffering substance.

Assay	min. 99.5 %
pH 5 % solution	9.0 - 9.2
Heavy metals (Pb)	max. 0.001 %

Cat.No.	Size
39783.02	1 kg

Sodium laurylsulfate

see 20765 Dodecylsulfate·Na-salt in Pellets, page 41

Sodium laurylsulfate

see 20760 Dodecylsulfate·Na-salt, page 41

Sodium pyruvate

see 15220 Pyruvic acid·Na-salt, page 102

Sodium succinate

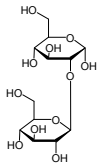
see 14972 Succinic acid·Na_2-salt, page 143

Sodium taurocholate

see 35779 Taurocholic acid·Na-salt, page 146

α-Sophorose research grade

(2-O-β-D-Glucopyranosyl-α-D-glucose)
$C_{12}H_{22}O_{11} \cdot H_2O$ ♦ M_r 360.3 ♦ CAS [20429-79-2]



WGK 1 ♦ HS 29400000

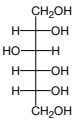
Disaccharide component of the microbial glycolipids produced by yeast termed sophorolipids. Sophorose has been identified as a potent inducer of cellulase gene expression in studies of *T. reesei* fermentation.

Assay (HPLC) min. 98.0 %

Cat.No.	Size	EUR
35208.01	50 mg	117,00

D-Sorbitol research grade

(Sorbit, Glucitol)
$C_6H_{14}O_6$ ♦ M_r 182.2 ♦ CAS [50-70-4]



HS 29054499
Storage Temperature: +15 °C to +30 °C

For biochemistry, bacteriology and microbiology

Assay (HPLC)	min. 98 %
MP	96 - 100 °C
Lead	max. 10 ppm

Cat.No.	Size
35231.02	1 kg

Spacer Strips

HS 39269097

Silicone, size 265 x 7 x 0.5 mm, for forming the mould in capillary casting techniques.

Cat.No.	Size
42901.01	4 pieces

Spectinomycin·2HCl pentahydrate

(Actinospectacin; M 141)
$C_{14}H_{24}N_2O_7 \cdot 2HCl \cdot 5H_2O$ ♦ M_r 495.4 ♦ CAS [22189-32-8]

WARNING
H315-H319-H335 ♦ EINECS 244-554-3 ♦ HS 29419000
Storage temperature +2 °C to +8 °C

Cell culture tested.
Water-soluble aminoglycoside antibiotic from *Streptomyces sp.* (1,2). Inhibitor of protein synthesis (3). Differs from other aminoglycoside derivatives in that it is bacteriostatic instead of bactericidal.

Stock solution: 10 mg/ml in distilled water, sterile filtered.
For molecular biology applications standard working concentration is 100 µg/ml and in cell culture 7.5 – 20 mg/l.

References:

1. Wagner J. G. et al. (1968) Int. Z. Klin. Pharmakol. Ther. Toxikol. ***1***, 261 – 85
2. Wallace, B.J. et al. (1979) Antibiotics ***5***, 272 – 303
3. Wallace, P.-C. et al. (1979) in Antibiotics, vol. ***V***, part I. Mechanism of Action of Antibacterial Agents, Springer Verlag Berlin

Cat.No.	Size
35294.01	5 g

Spectra/Por® 1 dialysis tubing, MWCO 6000 - 8000 RC, diameter 6.4 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	10 mm
Nominal dry diameter	6.4 mm
Approx. filling volume	0.32 ml/cm
Nominal dry wall thickness	30 - 50 µm

Cat.No.	Size
44170.01	15 m

Spectra/Por® 1 dialysis tubing, MWCO 6000 - 8000
RC, diameter 14.6 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	23 mm
Nominal dry diameter	14.6 mm
Approx. filling volume	1.7 ml/cm
Nominal dry wall thickness	30 - 50 µm

Cat.No.	Size
44171.01	30 m

Spectra/Por® 1 dialysis tubing, MWCO 6000 - 8000
RC, diameter 20.4 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	32 mm
Nominal dry diameter	20.4 mm
Approx. filling volume	3.3 ml/cm
Nominal dry wall thickness	30 – 50 µm

Note:
The trial size of 5 m includes additionally one standard Spectra/Por® closure, one weighted Spectra/Por® closure and 5 opening picks.

Cat.No.	Size
44172.02	5 m
44172.01	30 m

Spectra/Por® 1 dialysis tubing, MWCO 6000 - 8000
RC, diameter 25.5 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	40 mm
Nominal dry diameter	25.5 mm
Approx. filling volume	5.1 ml/cm
Nominal dry wall thickness	30 – 50 µm

Cat.No.	Size
44173.01	30 m

Spectra/Por® 1 dialysis tubing, MWCO 6000 - 8000
RC, diameter 32 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	50 mm
Nominal dry diameter	32 mm
Approx. filling volume	7.9 ml/cm
Nominal dry wall thickness	30 - 50 µm

Note:
The trial size of 5 m includes additionally one standard Spectra/Por® closure, one weighted Spectra/Por® closure and 5 opening picks.

Cat.No.	Size
44174.02	5 m
44174.01	30 m

Spectra/Por® 3 dialysis tubing, MWCO 3500
RC diameter 11.5 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	25 - 30 µm

Note:
The trial size of 5 m includes additionally one standard Spectra/Por® closure, one weighted Spectra/Por® closure and 5 opening picks.

Cat.No.	Size
44183.02	5 m
44183.01	15 m

Spectra/Por® 3 dialysis tubing, MWCO 3500
RC, diameter 29 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	25 - 30 µm

Cat.No.	Size
44184.01	15 m

Spectra/Por® 3 dialysis tubing, MWCO 3500
RC, diameter 34 mm

HS 39173200

Packed dry, with glycerol as protection for embrittlement, which can easily be removed by soaking in water. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	54 mm
Nominal dry diameter	34 mm
Approx. filling volume	9.3 ml/cm
Nominal dry wall thickness	25 - 30 µm

Note:
The trial size of 5 m includes additionally one standard Spectra/Por® closure, one weighted Spectra/Por® closure and 5 opening picks.

Cat.No.	Size
44185.02	5 m
44185.01	15 m

Spectra/Por® 6 dialysis tubing, MWCO 1000
RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 - 65 µm

Cat.No.	Size
44192.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 1000
RC, diameter 24 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	38 mm
Nominal dry diameter	24 mm
Approx. filling volume	4.6 ml/cm
Nominal dry wall thickness	60 - 65 µm

Cat.No.	Size
44193.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 1000

RC, diameter 29 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	60 - 65 µm

Cat.No.	Size
44194.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 2000

RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 - 65 µm

Cat.No.	Size
44196.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 2000

RC, diameter 24 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	38 mm
Nominal dry diameter	24 mm
Approx. filling volume	4.6 ml/cm
Nominal dry wall thickness	60 - 65 µm

Cat.No.	Size
44197.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 2000

RC, diameter 29 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	60 - 65 µm

Cat.No.	Size
44198.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 3500

RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44199.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 3500

RC, diameter 29 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44200.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 3500

RC, diameter 34 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	54 mm
Nominal dry diameter	34 mm
Approx. filling volume	9.3 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44201.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000

RC, diameter 5.1 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	8 mm
Nominal dry diameter	5.1 mm
Approx. filling volume	0.20 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44202.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000

RC, diameter 7.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	12 mm
Nominal dry diameter	7.5 mm
Approx. filling volume	0.45 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44203.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000

RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44204.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000
RC, diameter 15 mm

HS 39173200

Pre-wetted (containing 0.1 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	24 mm
Nominal dry diameter	15 mm
Approx. filling volume	1.8 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44205.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000
RC, diameter 20.4 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	32 mm
Nominal dry diameter	20.4 mm
Approx. filling volume	3.3 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44206.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000
RC, diameter 25.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	40 mm
Nominal dry diameter	25.5 mm
Approx. filling volume	5.1 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44207.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 8000
RC, diameter 32 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	50 mm
Nominal dry diameter	32 mm
Approx. filling volume	7.9 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44208.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 10 000
RC, diameter 5.1 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	8 mm
Nominal dry diameter	5.1 mm
Approx. filling volume	0.20 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44209.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 10 000
RC, diameter 7.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	12 mm
Nominal dry diameter	7.5 mm
Approx. filling volume	0.45 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44210.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 10 000
RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44211.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 10 000
RC, diameter 15 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	24 mm
Nominal dry diameter	15 mm
Approx. filling volume	1.8 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44212.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 10 000
RC, diameter 20.4 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	32 mm
Nominal dry diameter	20.4 mm
Approx. filling volume	3.3 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44213.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 10 000
RC, diameter 29 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44214.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 15 000
RC, diameter 5.1 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	8 mm
Nominal dry diameter	5.1 mm
Approx. filling volume	0.20 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44215.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 15 000
RC, diameter 7.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	12 mm
Nominal dry diameter	7.5 mm
Approx. filling volume	0.45 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44216.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 15 000
RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44217.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 15 000
RC, diameter 15 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	24 mm
Nominal dry diameter	15 mm
Approx. filling volume	1.8 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44218.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 15 000
RC, diameter 20.4 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	32 mm
Nominal dry diameter	20.4 mm
Approx. filling volume	3.3 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44219.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 15 000
RC, diameter 29 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	45 mm
Nominal dry diameter	29 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44220.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 25 000
RC, diameter 5.1 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	8 mm
Nominal dry diameter	5.1 mm
Approx. filling volume	0.20 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44221.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 25 000
RC, diameter 7.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	12 mm
Nominal dry diameter	7.5 mm
Approx. filling volume	0.45 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44222.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 25 000
RC, diameter 11.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	18 mm
Nominal dry diameter	11.5 mm
Approx. filling volume	1.1 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44223.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 25 000
RC, diameter 15 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	24 mm
Nominal dry diameter	15 mm
Approx. filling volume	1.8 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44224.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 25 000
RC, diameter 18 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	28 mm
Nominal dry diameter	18 mm
Approx. filling volume	2.5 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44225.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 25 000
RC, diameter 22 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	34 mm
Nominal dry diameter	22 mm
Approx. filling volume	3.7 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44226.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 50 000
RC, diameter 6.4 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	10 mm
Nominal dry diameter	6.4 mm
Approx. filling volume	0.32 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44227.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 50 000
RC, diameter 7.5 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	12 mm
Nominal dry diameter	7.5 mm
Approx. filling volume	0.45 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44228.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 50 000
RC, diameter 18 mm

HS 39173200

Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	28 mm
Nominal dry diameter	18 mm
Approx. filling volume	2.5 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44229.01	10 m

Spectra/Por® 6 dialysis tubing, MWCO 50 000
RC, diameter 22 mm

HS 39173200

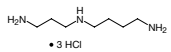
Pre-wetted (containing 0.05 % sodium azide). Ready–to-use, no soaking for removal of glycerol necessary. Contains low level of heavy metal and sulfide impurities.

Nominal dry flat width	34 mm
Nominal dry diameter	22 mm
Approx. filling volume	3.7 ml/cm
Nominal dry wall thickness	60 – 65 µm

Cat.No.	Size
44230.01	10 m

Spermidine·3HCl research grade

(N-(3-Aminopropyl)-1,4-diaminobutane·3HCl)
$C_7H_{19}N_3$·3HCl ♦ M_r 254.6 ♦ CAS [334-50-9]



WARNING
H315-H319-H335 ♦ EINECS 206-379-0 ♦ WGK 1 ♦ HS 29212900
Storage temperature +2 °C to +8 °C

Keep under argon.
Endogenous polyamine that inhibits neuronal nitric oxide synthase (nNOS). It binds and precipitates DNA and may be used to purify DNA binding proteins. Additionally, spermidine stimulates T4 polynucleotide kinase activity. It is involved in growth, development, and the stress response in plants.

Assay (titr.) min. 99.0 %

Cat.No.	Size
35285.02	5 g

Spurr Embedding Medium

see 21041 Embedding Medium ERL-4221D, page 45

20x SSC Buffer molecular biology grade

WGK 1 ♦ HS 38220000

DNase/RNase not detected. 20 x concentrated aqueous solution. Commonly used buffer in transfer, blocking and hybridization in both Northern and Southern Blotting

Composition:

NaCl (cat. no. 39781)	175.32 g/L (3 M)
Na_3-citrate x 2 H_2O (cat. no. 38642)	88.23 g/L (0.3 M)

References:

1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (pp. 7.46-7.47, 9.38-9.39, 9.50)
2. Ed. Ausubel et al., (1995) Current Protocols in Molecular Biology, Wiley & Sons, Inc. (New York, NY), Suppl. ***40***, A.2.5

Cat.No.	Size
42555.01	1 L
42555.04	10 L

Stabilizing Clamps, for HPE™-BH

HS 90272000

Pair of connective clamps for HPE™-BlueHorizon multi-decks.

Cat.No.	Size
HPE-SC	2 pieces

Stabilizing Feet, for HPE™-BH

HS 90272000

Pair of stabilizing feet for HPE™-BlueHorizon multi-decks.

Cat.No.	Size
HPE-SF	2 pieces

Starter Kit: 2 Mini A and 2 Mini G Plugs

HS 38220000

The Mini Protein A & G spin column is the ideal tool for screening antibody expression and for small-scale purification of antibodies for solution-state immunoassays, immuno-histochemical and immuno-fluorescence studies, Western Blotting and immuno-precipitation studies. Antibodies are purified using a powerful, patented affinity spin column using a microfuge common to all biochemistry and immunology laboratories.

Contents:
Quantity: 2 x 0.23 Protein A Mini spin columns +
2 x 0.23 Protein G Mini spin columns
Max. sample volume per load: 0.65 ml, fixed angle rotor
Collection tube: 2.2 ml microcentrifuge tubes
Min. number of purifications: 12 purifications (3 uses per column)
Typical capacity/preparation: 1 mg human IgG

Cat.No.	Size
42266.01	1 kit

Steel Tray + Grid + Lid

HS 90272000

Tray for cold and hot staining, 150 mm x 300 mm x 60 mm
for all 125 mm x 260 mm gels.

Cat.No.	Size
HPE-A19	1 piece

Steel Tray Large + Grid + Lid

HS 90272000

For cold and hot staining, 220 mm x 280 mm x 60 mm
for all large and DALT gels.

Cat.No.	Size
HPE-A20	1 piece

Steel Tray Multi 6 for up to 6 large gels, with 6 grids

HS 90272000

The MultiStainer is a stainless steel vessel with lid designed to stain up to six gels. The staining solution is stirred using a magnetic stir bar underneath the grid to ensure efficient mixing. The gels are positioned on stainless steel grids well separated from each other for simultaneously staining. Suitable for both cold and hot Coomassie® staining and for both backed and unbacked (slab) gels up to 20 cm x 26 cm in size.

Coomassie = registered trademark of ICI Ltd.

Cat.No.	Size
HPE-A21	1 piece

Stem bromelain

see 15250 Bromelain from pineapple stem ca. 0.5 DMC-U/mg, page 22

Streptavidin agarose

see 42178 SERVA Streptavidin Agarose Resin, page 122

Streptavidin lyophil. salt-free

M_r ca. 60000 ♦ CAS [9013-20-1]

HS 35040090
Storage temperature -15 °C to -25 °C

Avidin from *Streptomyces avidinii,* isolated from fermentation filtrates by ion exchange chromatography.

Unit definition: one unit of streptavidin will bind 1 µg of biotin.
Free binding sites (per tetramer) min. 3
Isoelectric point: 6.5 - 7.5

Cat.No.	Size
35490.01	1 mg
35490.02	5 mg

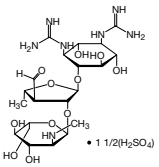
Streptomyces griseus neutral proteinase

see 33635 Pronase E from *Streptomyces griseus* min. 5.0 DMC-U/mg, page 92

Streptomycin sulfate research grade, Ph. Eur.

$C_{21}H_{39}N_7O_{12}$·1 1/2 H_2SO_4 ♦ M_r 728.7 ♦ CAS [3810-74-0]

WARNING
H302-H361 ♦ EINECS 223-286-0 ♦
WGK 2 ♦ HS 29412080



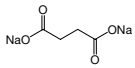
Min. 720 U/mg. Aminoglycoside antibiotic from *Streptomyces griseus*. Blocks the initiation complex and causes misreading on ribosomes in protein synthesis. Inhibits function only of the 30S subunit.

References:
1. Zierhut, G. et al. (1979) Eur. J. Biochem. ***98,*** 577-83
2. Wallace, B.J. et al. (1979) in Antibiotics Vol.***V,*** part C; Mechanism of Action of Antibacterial Agents, Springer, Berlin
3. Schwalb, C. et al. (2003) Biochemistry ***42***, 9491-7

Cat.No.	Size
35500.01	10 g
35500.02	100 g

Succinic acid·Na_2-salt research grade

(Sodium succinate)
$C_4H_4O_4$·Na_2·$6H_2O$ ♦ M_r 270.1 ♦ CAS [6106-21-4]



EINECS 205-778-7 ♦ WGK 1L ♦ HS 29171980

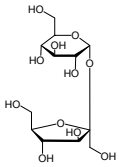
Used as a tricarboxylic acid cycle (Krebs cycle) supplement in cell culture applications. Additionally, it is used to study x-ray crystallography, protein structural analysis and proteomics.

Assay (titr., based on dried substance) min. 99.0 %

Cat.No.	Size
14972.02	500 g

Sucrose analytical grade

(Saccharose; Cane sugar)
$C_{12}H_{22}O_{11}$ ♦ M_r 342.3 ♦ CAS [57-50-1]



EINECS 200-334-9 ♦ HS 29400000

Free of DNA, RNA, DNase and RNase. Special grade for biochemistry and density gradient centrifugation. Tested for use in tissue culture.

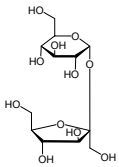
Assay (HPLC)	min. 99.0 %
[α] 20 °/D (c=20 % in water)	+66 ± 1 °
A 1 cm/50 % in water	
260 nm	max. 0.25
280 nm	max. 0.2
Iron (Fe)	max. 0.5 ppm
Heavy metals (Pb)	max. 0.1 ppm

References:
1. Fraenkel-Conrat, H. & Singer, B. (1962) Biochemistry ***1,*** 120-8 (p. 127)

Cat.No.	Size
35579.02	500 g
35579.03	5 kg

Sucrose research grade

(Saccharose; Cane sugar)
$C_{12}H_{22}O_{11}$ ♦ M_r 342.3 ♦ CAS [57-50-1]



EINECS 200-334-9 ♦ HS 29400000

For gradient centrifugation, bacteriology and electrophoresis.

Assay (HPLC)	min. 98.0 %
A 1 cm/50 % in water	
260 nm	max. 0.3
280 nm	max. 0.25
Heavy metals (Pb)	max. 1 ppm

Cat.No.	Size
35580.02	1 kg
35580.03	5 kg

Sulforhodamine B Cytotoxicity Assay

HS 38220000

The Sulforhodamine B (SRB) Cytotoxicity Assay, developed in 1990, remains one of the most widely used methods for *in vitro* cytotoxicity screening. It relies on the ability of SRB to bind to protein components of cells fixed to tissue culture plates. SRB is a bright-pink aminoxanthene dye with two sulfonic groups that bind to basic amino acid residues under mild acidic conditions and dissociate under basic conditions. As the binding of SRB is stoichiometric, the amount of dye extracted from stained cells is directly proportional to the cell mass.

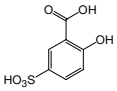
The fixed dye is solubilized and is measured photometrically at OD 540 nm with a reference filter of 690 nm. The OD values correlate with total protein content and therefore with cell number.
The assay is sensitive, simple, reproducible and more rapid with better linearity than the formazan-based assays. It has a good signal-to-noise ratio and has a stable end-point that does not require a time-sensitive measurement, as do the MTT or XTT assays.

Content: 0.4 g Sulforhodamine dye, 2x 50 ml Fixative Reagent, 2x 50 ml 10x Dye Wash Solution, 4x 50 ml SRB Solubilization Buffer

Cat.No.	Size
39906.01	1 kit

5-Sulfosalicylic acid analytical grade

(2-Hydroxy-5-sulfobenzoic acid)
$C_7H_6O_6S{\cdot}2H_2O$ ♦ M_r 254.23 ♦ CAS [5965-83-3]



DANGER
H302-H314 ♦ GGVSE/ADR 8 III UN2585 ♦ IATA 8 III UN2585 ♦ EINECS 202-555-6 ♦ WGK 2 ♦

HS 29182900

Ideal fixative in microscopy and histology, because compatible with all downstream staining procedures.
Further, it can be used as a metal scavenger due to its strong association with a range of metals. Proteins are precipitated upon complexation with 5-sulfosalicylic acid, allowing the removal of proteins prior to e.g. chromatographic analysis.

Assay min. 99.0 %

Cat.No.	Size
35706.01	100 g

Super Co-NTA Agarose Resin

HS 38220000

Super Cobalt NTA Affinity Resin designed for affinity purification of polyhistidine tagged proteins. Cobalt ions are carefully loaded onto a 7.5 % cross-linked agarose matrix (medium particle diameter 40 µm) via a NTA coupled ligand to obtain a stable affinity matrix with the highest binding capacity for histidine residues (up to 10 mg/ml determined from *E. coli* cleared lysate). Other metal ions such as Ni^{2+}, Zn^{2+}, Fe^{3+}, and Al^{3+} can also be used resulting in different affinities. If required, the cobalt ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: 7.5 % cross linked agarose
Coupled ligand: Nitrilotriacetic acid (NTA)
Binding capacity: 30 mg/ml
Bead size: 32 – 60 µm (40 µm medium)
Flow rate: 0.25 – 1 ml/min (optimum), 6 ml/min (max.)
Maximum pressure: 72 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 14
Cleaning buffer examples: 100 % methanol, 100 % ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30 % (v/v) acetonitrile
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42320.01	10 ml

Super Co-NTA Agarose Resin

HS 38220000

Super Cobalt NTA Affinity Resin designed for affinity purification of polyhistidine tagged proteins. Cobalt ions are carefully loaded onto a 7.5 % cross-linked agarose matrix (medium particle diameter 40 µm) via a NTA coupled ligand to obtain a stable affinity matrix with the highest binding capacity for histidine residues (up to 10 mg/ml determined from *E.coli* cleared lysate). Other metal ions such as Ni^{2+}, Zn^{2+}, Fe^{3+}, and Al^{3+} can also be used resulting in different affinities. If required, the cobalt ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: 7.5 % cross linked agarose
Coupled ligand: Nitrilotriacetic acid (NTA)
Binding capacity: 30 mg/ml
Bead size: 32 – 60 µm (40 µm medium)
Flow rate: 0.25 – 1 ml/min (optimum), 6 ml/min (max.)
Maximum pressure: 72 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 14
Cleaning buffer examples: 100 % methanol, 100 % ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30 % (v/v) acetonitrile
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8°C (long-term)

Cat.No.	Size
42321.01	25 ml

Super Co-NTA Agarose Resin

HS 38220000

Super Cobalt NTA Affinity Resin designed for affinity purification of polyhistidine tagged proteins. Cobalt ions are carefully loaded onto a 7.5 % cross-linked agarose matrix (medium particle diameter 40 µm) via a NTA coupled ligand to obtain a stable affinity matrix with the highest binding capacity for histidine residues (up to 10 mg/ml determined from *E.coli* cleared lysate). Other metal ions such as Ni^{2+}, Zn^{2+}, Fe^{3+}, and Al^{3+} can also be used resulting in different affinities. If required, the cobalt ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: 7.5 % cross linked agarose
Coupled ligand: Nitrilotriacetic acid (NTA)
Binding capacity: 30 mg/ml
Bead size: 32 – 60 µm (40 µm medium)
Flow rate: 0.25 – 1 ml/min (optimum), 6 ml/min (max.)
Maximum pressure: 72 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 4
Cleaning buffer examples: 100 % methanol, 100 % ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30 % (v/v) acetonitrile
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42322.01	100 ml

Super Ni-NTA Agarose Resin

HS 38220000

Super Nickel NTA Affinity Resin designed for affinity purification of polyhistidine tagged proteins. Nickel ions are carefully loaded onto a 7.5 % cross-linked agarose matrix (medium particle diameter 40 µm) via a NTA coupled ligand to obtain a stable affinity matrix with the highest binding capacity for histidine residues (up to 70 mg/ml determined from *E. coli* cleared lysate). Other metal ions such as Co^{2+}, Zn^{2+}, Fe^{3+}, and Al^{3+} can also be used resulting in different affinities.
If required, the nickel ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: 7.5 % cross linked agarose
Coupled ligand: Nitrilotriacetic acid (NTA)
Binding capacity: 70 mg/ml
Bead size: 32 – 60 µm (40 µm medium)
Flow rate: 0.25 – 2 ml/min (optimum), 6 ml/min (max.)
Maximum pressure: 72 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 14
Cleaning buffer examples: 100 % methanol, 100 % ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30 % (v/v) acetonitrile
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42317.01	10 ml

Super Ni-NTA Agarose Resin

HS 38220000

Super Nickel NTA Affinity Resin designed for affinity purification of polyhistidine tagged proteins. Nickel ions are carefully loaded onto a 7.5 % cross-linked agarose matrix (medium particle diameter 40 µm) via a NTA-coupled ligand to obtain a stable affinity matrix with the highest binding capacity for histidine residues (up to 70 mg/ml determined from *E.coli* cleared lysate). Other metal ions such as Co^{2+}, Zn^{2+}, Fe^{3+}, and Al^{3+} can also be used resulting in different affinities.
If required, the Nickel ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: 7.5 % cross linked agarose
Coupled ligand: Nitrilotriacetic acid (NTA)
Binding capacity: 70 mg/ml
Bead size: 32 – 60 µm (40 µm medium)
Flow rate: 0.25 – 2 ml/min (optimum), 6 ml/min (max.)
Maximum pressure: 72 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 14
Cleaning buffer examples: 100 % methanol, 100 % ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30 % (v/v) acetonitrile
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42318.01	25 ml

Super Ni-NTA Agarose Resin

HS 38220000

Super Nickel NTA Affinity Resin designed for affinity purification of polyhistidine tagged proteins. Nickel ions are carefully loaded onto a 7.5 % cross-linked agarose matrix (medium particle diameter 40 µm) via a NTA coupled ligand to obtain a stable affinity matrix with the highest binding capacity for histidine residues (up to 70 mg/ml determined from *E.coli* cleared lysate). Other metal ions such as Co^{2+}, Zn^{2+}, Fe^{3+}, and Al^{3+} can also be used resulting in different affinities.
If required, the nickel ions can be removed from the agarose matrix using 5 wash steps with 100 mM EDTA, and the matrix recharged with a different metal ion.

Specifications
Specificity: Polyhistidine tag
Matrix: 7.5 % cross- linked agarose
Coupled ligand: Nitrilotriacetic acid (NTA)
Binding capacity: 70 mg/ml
Bead size: 32 – 60 µm (40 µm medium)
Flow rate: 0.25 – 2 ml/min (optimum), 6 ml/min (max.)
Maximum pressure: 72 psi
Buffer compatibility: Common aqueous buffers from pH 2 - 14
Cleaning buffer examples: 100 % methanol, 100 % ethanol, 8 M urea, 6 M guanidinium hydrochloride, 30 % (v/v) acetonitrile
Shipping/delivery: 50 % (v/v) resin suspension in 20 % ethanol at ambient temperature
Storage: Equilibration buffer at 2 - 8 °C (short-term) 20 % ethanol at 2 - 8 °C (long-term)

Cat.No.	Size
42319.01	100 ml

Synperonic® F108 pract.

M_r ca. 14000 ♦ CAS [9003-11-6]

WGK 1L ♦ HS 34021900

Polypropylene glycol (M_r ca. 3 250): poly(ethylene glycol) ca. 1:4.
MP 55 - 60 °C. Strongly hydrophilic (HLB ca. 27). More than 10 % soluble in water.

Synperonic = Registered trademark of ICI

Cat.No.	Size
35726.01	100 g
35726.02	1 kg

Synperonic® F68 pract.

M_r ca. 8300 ♦ CAS [9003-11-6]

WGK 1L ♦ HS 34021900

Polyol detergent, block-copolymer. Pluronic™ PE 6800. Poloxamer 188.
Poly(propylene glycol) (M_r ca. 1 750): polyethylene glycol ca. 1:4.
MP ca. 55 °C.
Strongly hydrophilic detergent (HLB approx. 29). More than 10 % soluble in water, forms foams moderately. Used in cell culture to protect microorganisms, animal and plant cells against mechanical damage.

Synperonic = trademark of ICI, Pluronic = trademark of BASF AG

References:
1. Bentley, P.K. et al. (1989) Biotechnol. Lett. ***11,*** 111-4
2. King, A.T. et al. (1990) Biotechnol. Lett. ***12,*** 29-32
3. Murhammer, D.W. & Goochee, C.F. (1990) Biotechnol. Prog. ***6,*** 142-8

Cat.No.	Size
35724.01	100 g
35724.02	1 kg

TAE Buffer (10x) molecular biology grade

WARNING
H315-H319 ♦ WGK 2 ♦ HS 38220000

10 x concentrated aqueous solution.
TAE Buffer is used for the electrophoresis of nucleic acids. TAE has a lower buffer capacity than TBE, however linear ds DNA tends to run faster in TAE than in TBE.

Tris (cat. no. 37180)	48.46 g/L (0.4 M)
EDTA-Na_2-salt (cat. no. 11280)	3.72 g/L (0.01 M)
Acetic acid (cat. no. 45633)	12.01 g/L (0.2 M)

References:
1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (B.23, p.6.7)

Cat.No.	Size
42553.01	1 L
42553.04	10 L

TAE Buffer (50x) molecular biology grade

WARNING
H315-H319 ♦ WGK 2 ♦ HS 38220000

50x concentrated aqueous solution.
DNase/RNase not detected. TAE Buffer is used for the electrophoresis of nucleic acids. TAE has a lower buffer capacity than TBE, however linear dsDNA tends to run faster in TAE than in TBE.

Tris (cat. no. 37180)	242.3 g/L
EDTA-Na_2-salt (cat. no. 11280)	18.6 g/L
Acetic acid (cat. no. 45633)	60.05 g/L

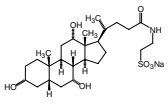
Cat.No.	Size
42549.01	1 L

TAPS

see 37194 N-Tris(hydroxymethyl)methyl-3-aminopropane sulfonic acid, page 151

Taurocholic acid·Na-salt pure

(Sodium taurocholate)
$C_{26}H_{44}NO_7S{\cdot}Na$. aq ♦ M_r 537.7 (anhydrous) ♦
CAS [145-42-6]



EINECS 205-653-7 ♦ WGK 1 ♦ HS 29181930
Storage temperature +2 °C to +8 °C

Used as a detergent to solubilize membrane-bound proteins in their native state, in the preparation of digestive enzymes, and as an emulsifier.

Purity (TLC)	min. 98.0 %
Cholic acid-Na salt	max. 1.0 %

Cat.No.	Size
35779.02	5 g

TBE Buffer (10x)

DANGER
H315-H319-H360DF ♦ WGK 1 ♦ HS 38220000

10 x concentrated aqueous solution.
TBE Buffer is widely used for the electrophoresis of nucleic acids and has a higher buffer capacity than TAE. It can be used for DNA and RNA polyacrylamide and agarose gel electrophoresis.

Composition:

Tris (cat. no. 37180)	107.78 g/L (0.89 M)
EDTA-Na_2-salt (cat. no. 11280)	7.44 g/L (0.02 M)
Boric acid (cat. no. 15165)	55.0 g/L (0.89 M)

References:
1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (B.23, p.6.7)

Cat.No.	Size
42557.01	2 x 500 ml

TBE Buffer (10x) molecular biology grade

DANGER
H315-H319-H360DF ♦ HS 38220000

10 x concentrated aqueous solution.
TBE Buffer is widely used for the electrophoresis of nucleic acids and has a higher buffer capacity than TAE. It can be used for DNA and RNA polyacrylamide and agarose gel electrophoresis.

Tris (cat. no. 37186)	107.78 g/l (0.89 M)
EDTA-Na_2-salt (cat. no. 39760)	7.44 g/l (0.02 M)
Boric acid (cat. no. 15165)	55.0 g/L (0.89 M)

References:
1. Sambrook, Fritsch, Maniatis (1989) Molecular Cloning, Cold Spring Harbor Laboratory Press (B.23, p.6.7)

Cat.No.	Size
39320.01	2,5 L

TBS Buffer (10x) sterile

(Tris-Buffered Saline)
HS 38220000

10 x concentrated aqueous solution, autoclaved.
TBS Buffer is a widely used buffer in protein detection systems like Western Blot analysis, for immunocytological and immunohistological detection, *in situ* hybridization, apoptosis assays and staining of nuclei.

Composition:

NaCl (cat. no. 30183)	1.5 M
KCl (cat. no. 26868)	30 mM
Tris (cat. no. 37180)	250 mM
pH	7.2 - 7.6

Cat.No.	Size
42596.01	1 L

TBST Buffer (10X) sterile

HS 38220000

10 x concentrated aqueous solution with 0.5 Tween 20, sterile filtered.
TBST Buffer is a widely used buffer in protein detection systems like Western Blot analysis, for immunocytological and immunohistological detection, in situ hybridization, apoptosis assays and staining of nuclei.

Cat.No.	Size
42598.01	1 L

TCA analytical grade

see 36910 Trichloroacetic acid, page 149

TCEP

see 36970 Tris-(2-carboxyethyl)phosphine hydrochloride, page 150

TE Buffer (100x)

HS 38220000

100 x concentrated aqueous solution.

Tris (cat. no. 37180)	121.14 g/L (1 M)
EDTA-Na_2-salt (cat. no. 11280)	37.22 g/L (0.1 M)
pH	8.0 ± 0.2

Cat.No.	Size
42554.01	1 L

TE Buffer (100x) pH 8.0 molecular biology grade

WGK 2 ♦ HS 38220000

DNase/RNase not detected. 0.2 µm filtered. 100 x concentrated aqueous solution.

Tris (cat. no. 37180)	121.14 g/L (1 M)
EDTA-Na_2-salt (cat. no. 11280)	37.22 g/L (0.1 M)
pH	8.0 ± 0.2

Cat.No.	Size
39799.01	100 ml

Teepol 610 pract.

(Lensodel PB; Neodol PB)

DANGER
H315-H318 ♦ WGK 2 ♦ HS 34021190

32 % aqueous solution of sodium C9-C11 alkylethersulfates.
A dilution of 1:20 has pH 7.6. For determination of iron in serum (1). Teepol 710 originally used by the author is no longer available.

References:
1. Lauber, K. (1965) Z. Klin. Chem. ***3***, 96-9

Cat.No.	Size
35796.01	1 L
35796.02	5 L

TEMED

see 35930 N,N,N‘,N‘-Tetramethyl-ethylenediamine, page 147

TEMED

see 35925 N,N,N‘,N‘-Tetramethyl-ethylenediamine, page 147

Tergitol™ 15-S-9

HS: 34021300 ♦ CAS [68131-40-8] .

(Polyethylene glycol ether, sec-alcohol ethoxylate, sec-alcoxy polyethylene glycol)

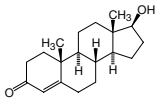
CMC (25 °C) 52 ppm, HLB 13.3
Nonionic detergent, alternative for Triton X-100. Can be used for the isolation, purification and analysis of membrane components. Suitable for solubilization of hydrophobic proteins.

Tergitol = trademark of DOW Chemical company

Cat.No.	Size
37242.01	100 ml
37242.02	500 ml
37242.03	2,5 L

Testosterone research grade, Ph. Eur.

(4-Androsten-17β-ol-3-one; 17β-Hydroxy-4-androsten-3-one)



$C_{19}H_{28}O_2$ ♦ M_r 288.4 ♦ CAS [58-22-0]

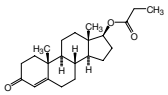
DANGER
H302-H351-H360DF-H362 ♦
EINECS 200-370-5 ♦ HS 29372900

Assay (UV) 97.0 - 103.0 %

Cat.No.	Size
35800.02	5 g

Testosterone propionate research grade

$C_{22}H_{32}O_3$ ♦ M_r 344.5 ♦ CAS [57-85-2]



DANGER
H302-H351-H360 ♦
EINECS 200-351-1 ♦ WGK 2 ♦
HS 29372900
Storage temperature +2 °C to +8 °C

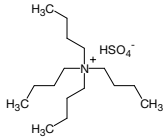
Testosterone propionate is the esterified form of testosterone intended for used in clinical applications.

Assay (UV) 97.0 - 103.0 %

Cat.No.	Size
35805.02	5 g

Tetra-n-butylammonium·hydrogensulfate analytical grade

$C_{16}H_{36}N^+HSO_4^-$ ♦ M_r 339.5 ♦ CAS [32503-27-8]



WARNING
H315-H319 ♦ EINECS 251-068-5 ♦ WGK 2 ♦
HS 29239000

For ion-pair reversed phase chromatography of ribonucleotides.

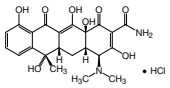
Assay (titr.) min. 98.0 %

References:
1. Hoffmann, N.E. & Liao, J.C. (1977) Anal. Chem. ***49,*** 2231- 4

Cat.No.	Size
35854.01	25 g

Tetracycline·HCl research grade, USP

(Achromycin·HCl)



$C_{22}H_{24}N_2O_8$·HCl ♦ M_r 480.9 ♦ CAS [64-75-5]

WARNING
H315-H319-H335-H361-H362 ♦
EINECS 200-593-8 ♦ WGK 1 ♦ HS 29413000

Bacteriostatic antibiotic isolated from strains of *Streptomyces,* active against gram positive and gram negative bacteria and also against intracellular microorganisms like Rickettsia and mycoplasma. Inhibits bacterial protein synthesis by preventing aminoacyl-RNA binding to the A-side of the 30S ribosomal subunit. Sample analysis (1,2). Used for the selection of resistant clones (3,4).

Assay min. 900 µg/mg
Heavy metals max. 50 ppm

References:
1. Anderson, C.R. et al. (2005) J. Chromatogr. A ***1075***, 23-32
2. Koesukwiwat, U. et al. (2007) . J. Chromatogr. A ***1140***, 147-56
3. Guillaume, G. et al. (2000) FEMS Microbiol. Ecology ***32***, 77-85
4. Call, D.R. et al. (2003) Antimicrob. Agents Chemother. ***47***, 3290-5
5. Loftin, K.A. et al. (2005) Environm. Toxicol. Chem. ***24***, 782-8
6. Munshi, T. et al. (2013) PLOS ONE ***8(3)***: e60143

Cat.No.	Size
35866.01	10 g
35866.02	100 g

N,N,N‘,N‘-Tetramethyl-ethylenediamine for electrophoresis

(TEMED; TD)

$C_6H_{16}N_2$ ♦ M_r 116.21 ♦ CAS [110-18-9]

DANGER
H225-H302-H314-H332 ♦ EG-Index 612-103-00-3 ♦ GGVSE/ADR 3 II UN2372 ♦ IATA 3 II UN2372 ♦
EINECS 203-744-6 ♦ WGK 1L ♦ HS 29212900

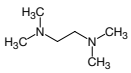
Filled under argon.
Used as an initiator along with ammonium persulfate for polymerization reactions. TEMED is responsible for the formation of free radicals from persulfate, thereby initiating the acrylamide polymerization process.
Tested as catalyst in polyacrylamide gel production.

Assay (GC) min. 99.0 %

Cat.No.	Size
35930.01	10 ml
35930.02	25 ml

N,N,N‘,N‘-Tetramethyl-ethylenediamine

(TEMED; TD)



$C_6H_{16}N_2$ ♦ M_r 116.21 ♦ CAS [110-18-9]

DANGER
H225-H302-H314-H332 ♦ EG-Index 612-103-00-3 ♦ GGVSE/ADR 3 II UN2372 ♦ IATA 3 II UN2372 ♦
EINECS 203-744-6 ♦ WGK 1L ♦ HS 29212900

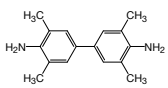
Used as an initiator along with ammonium persulfate for polymerization reactions. TEMED is responsible for the formation of free radicals from persulfate, thereby initiating the acrylamide polymerization process.

Assay (GC) min. 98.5 %

Cat.No.	Size
35925.01	100 ml
35925.02	500 ml

3,3‘,5,5‘-Tetramethylbenzidine research grade

(TMB)



$C_{16}H_{20}N_2$ ♦ M_r 240.4 ♦ CAS [54827-17-7]

WARNING
H302-H341 ♦ EINECS 259-364-6 ♦
WGK 2 ♦ HS 29215990

Substrate for horseradish peroxidase. More sensitive than ABTS and more stable and less toxic than diaminobenzidine. See also TMB Ready-To-Use ELISA Substrate (cat.no. 37068) and SERVAColor TMB Blot Solution (cat.no. 37071).

Assay (titr.) 98.0 - 102.0 %

Cat.No.	Size
35926.02	5 g
35926.03	25 g

Tetrazolium Red

see 37130 Triphenyltetrazolium chloride, page 150

TEV Protease, recombinant

M_r 27.000
HS 35079090 ✻

Recombinant TEV Protease is a highly site-specific cysteine protease, which is found in the Tobacco Etch Virus. Due to its sequence specificity, the enzyme is a very powerful reagent for removal of fusion tags from recombinant proteins after protein purification. The enzyme has been genetically modified to increase its activity and resistance to autolysis. It consists of the 27 kDa catalytic domain with an N-terminal polyhistidine tag. It recognizes a seven amino acid sequence of the general form Glu-X-X-Gln-Gly/Ser, most commonly Glu-Asn-Leu-Tyr-Phe-Gln-Gly, and cleaves between glutamine and glycine or serine.
Using the polyhistidine tag at the N-terminus of the protease the enzyme can be easily removed from the cleavage reaction by affinity chromatography following digestion.
Specific activity: 10 U/µl, supplied with 1 ml 20x TEV Reaction Buffer and 100 mM DTT.

Unit definition: 1 unit cleaves >95 % of 3 µg control substrate in one hour at 30 °C.

Cat.No.	Size
36403.01	1.000 U

THAM

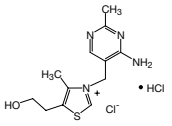
see 37190 Tris(hydroxymethyl)aminomethane, page 151

THAM

see 37181 Tris(hydroxymethyl)aminomethane, page 150

Thiamine·HCl research grade, Ph. Eur.

(Aneurin; Thiaminium chloride·hydrochloride; Vitamin B_1 hydrochloride)
$C_{12}H_{17}ClN_4OS{\cdot}HCl$ ♦ M_r 337.3 ♦ CAS [67-03-8]



EINECS 200-641-8 ♦ WGK 1L ♦ HS 29362200
Storage temperature +2 °C to +8 °C

Assay, dried (titr.) 98.5 - 101.0 %

Cat.No.	Size
36020.02	100 g

Thiazolyl blue

see 20395 3-(4,5-Dimethyl-2-thiazolyl)-2,5-diphenyl-2H-tetrazolium ·bromide, page 39

Thimerosal

see 11340 Ethylmercury thiosalicylic acid·Na-salt, page 47

2-Thiobarbituric acid analytical grade

(4,6-Dihydroxy-2-thiopyrimidine)
$C_4H_4N_2O_2S$ ♦ M_r 144.2 ♦ CAS [504-17-6]

EINECS 207-985-8 ♦ HS 29335400
Storage Temperature: +15 °C to +30 °C

Colorimetric reagent commonly used in the detection of malondialdehyde (MDA), a marker of lipid peroxidation. It forms a complex with MDA that can be quantified by colorimetric detection at 532 nm as a measure of lipid peroxidation.

Assay min. 99.0 %

Cat.No.	Size
36108.01	10 g
36108.02	100 g

Thioglycerol

see 28637 3-Mercapto-1,2-propanediol, page 75

Thiomersal

see 11340 Ethylmercury thiosalicylic acid·Na-salt, page 47

threo-1,4-Dimercapto-2,3-butanediol

see 20711 Dithiothreitol, page 40

L-Threonine research grade, Ph. Eur.

(Thr; L-2-Amino-3-hydroxybutyric acid)
$C_4H_9NO_3$ ♦ M_r 119.1 ♦ CAS [72-19-5]

EINECS 200-774-1 ♦ WGK 1L ♦ HS 29224985

Assay (titr., dried) 99.0 - 101.0 %

Cat.No.	Size
36382.03	100 g

Thrombin from bovine plasma min. 1000 units/mg protein lyophil.

(Coagulation Factor IIa)
EC 3.4.21.5 ♦ M_r ca. 37 000 ♦ CAS [9002-04-4]

WARNING
H315-H319-H335 ♦ EINECS 232-648-7 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Serine protease that activates factor XIII and converts fibrinogen to fibrin by selectively cleaving Arg-Gly bonds.
Suitable for removal of a tag, e.g. GST-tag, from a recombinant fusion protein containing an accessible thrombin recognition sequence.

Unit definition: 1 NIH unit clots a standard fibrinogen solution in 15 s at 37 °C (1).

Extraneous activities: very low fibrinolytic activity

References:
1. Baughman, D. J. (1970) Methods Enzymol. ***19,*** 145-57

Cat.No.	Size
36402.01	250 U
36402.02	1.000 U
36402.03	5.000 U

TMB

see 35926 3,3‘,5,5‘-Tetramethylbenzidine, page 147

TMB Ready-To-Use ELISA Substrate

WGK 1 ♦ HS 38220000
Storage temperature +2 °C to +8 °C

One bottle reagent: contains 3,3‘,5,5‘-tetramethylbenzidine, buffer and peroxide in a single convenient, ready-to-use solution recommended for the detection of horseradish peroxidase in ELISA assays. Develops a deep blue colour that turns bright yellow when the reaction is stopped. Light sensitive. Do not freeze.

Cat.No.	Size
37068.01	100 ml

TMB Ready-To-Use Substrate for Blotting

HS 38220000
Storage temperature +2 °C to +8 °C

Single component TMB substrate for detection of horseradish peroxidase in Western, Northern, Southern and Dot Blots. The reaction product is a blue precipitate. Contains a proprietary enhancer and non-toxic stabilizer, which guarantees a highly sensitive and consistent performance of the substrate.

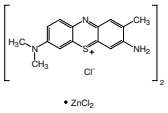
Cat.No.	Size
37070.01	100 ml

α-Toluenesulfonyl fluoride

see 32395 Phenylmethylsulfonyl fluoride, page 88

Toluidine Blue O salt

(Basic Blue 17; 2-Amino-7-dimethylamino-3-methylphenothiazinium chloride)
C.I.52040 ♦ $C_{15}H_{16}ClN_3S$ ♦ M_r 305.8 ♦ CAS [92-31-9]



EINECS 202-146-2 ♦ WGK 2L ♦ HS 29349990

Methylhomologue of Azure A. For RNA staining and RNase detection in electrophoresis (1). Stain for oligodeoxyribonucleotides (2). Stain for acidic mucopolysaccharides (proteoglycans) (3) and RNA (4).

Water (KF)	max. 10.0 %
A 1 cm/0.001 % in water λ max.	min. 0.8
λmax. 0.001 % in water	622 - 638 nm

References:
1. Wilson, C.W. (1969) Anal. Biochem. ***31,*** 506-11
2. Elson, E. & Jovin, T.M. (1969) Anal. Biochem. ***27,*** 193-204
3. Rennert, O.M. (1967) Nature ***213,*** 1133
4. Konings R.N.H. & Bloemendal, H. (1965) Eur. J. Biochem. ***7,*** 165-73

Cat.No.	Size
36693.02	25 g

Toluylene Red

see 30305 Neutral Red, page 82

Towbin Buffer for Western Blotting 10x concentrate

HS 38220000

Supplied as 10 x concentrate (0.25 M Tris and 1.92 M glycine in aqueous solution).
Working buffer: dilute 100 ml of 10x concentrate with 200 ml methanol and 700 ml distilled water.

Cat.No.	Size
42558.02	1 L

TPNH

see 30316 β-Nicotinamide adenine dinucleotide phosphate reduced ·Na_4-salt, page 83

Transferrin human (Apo) lyophil.

(Siderophilin)
M_r ca. 77 000

HS 35040090
Storage temperature -15 °C to -25 °C

Iron-poor, iron (Fe) max. 0.003 %. Donor units tested for HbsAg, Anti-HCV, Anti-HIV-1, anti-HIV-2, and Syphilis by FDA approved tests.

Protein content	min. 98.0 %

References:
1. Carver, F.J. & Frieden, E. (1978) Biochemistry ***17,*** 167-72

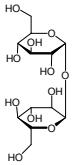
Cat.No.	Size
36760.01	50 mg

Trasylol®

see 13718 Aprotinin from bovine lung, page 13

D-Trehalose analytical grade

(α-D-Glucopyranosyl-α-D-glucopyranoside)
$C_{12}H_{22}O_{11}2H_2O$ ♦ M_r 378.3 ♦ CAS [6138-23-4]



EINECS 202-739-6 ♦ WGK 1 ♦ HS 29400000

Use as a cryoprotectant in a variety of cell freezing media.

Assay (HPLC)	min. 99.0 %
[α] 20 °C/D (c=7 % in water)	+176 ° to +180 °

Cat.No.	Size
36770.02	25 g
36770.03	100 g

Tricaine

see 12396 3-Aminobenzoic acid ethyl ester·methanesulfonate, page 10

Trichloroacetic acid analytical grade

(TCA)
$C_2HCl_3O_2$ ♦ M_r 163.4 ♦ CAS [76-03-9]

DANGER
H314-H410 ♦ EG-Index 607-004-00-7 ♦ GGVSE/ADR 8 II UN1839 ♦ IATA 8 II UN1839 ♦ EINECS 200-927-2 ♦ WGK 2L ♦ HS 29154000

Assay (titr.)	min. 99.0 %

Cat.No.	Size
36910.01	100 g
36910.03	500 g

Trichloroacetic acid, 20 % solution

(TCA)

DANGER
H314-H335-H336-H412 ♦ GGVSE/ADR 8 III UN2564 ♦ IATA 8 III UN2564 ♦ WGK 2S ♦ HS 38220000

Aqueous solution. TCA (cat. no. 36910): 200 g/L.
For protein precipitation from biological samples.
Suitable for fixation of native and IEF PAGE gels.

Cat.No.	Size
36913.02	1 L

Trichloromethane

see 39553 Chloroform, page 29

Trichloromethane

see 45627 Chloroform, page 30

Tricine

see 37196 Tris(hydroxymethyl)methylglycine, page 152

Tricine

see 37195 N-Tris(hydroxymethyl)methylglycine, page 152

Trifluoroacetic acid for LC-MS

$C_2HF_3O_2$ ♦ M_r 114.02 ♦ CAS [76-05-1]

DANGER
H314-H332-H412 ♦ GGVSE/ADR 8 I UN2699 ♦ IATA 8 I UN2699 ♦ WGK 2L ♦ HS 29159070

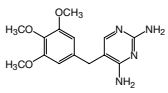
Additive for eluent phase for LC-MS.

Assay (acidimetric)	min. 99.9 %
Water (KF)	max. 0.05 %
Chloride	max. 10 ppm
Fluoride	max. 50 ppm
Sulphate	max. 10 ppm

Cat.No.	Size
45641.01	50 ml
45641.02	10x 1 ml

Trimethoprim research grade, Ph. Eur.

(5-(3,4,5-Trimethoxybenzyl)-2,4-diaminopyrimidine)
$C_{14}H_{18}N_4O_3$ ♦ M_r 290.32 ♦ CAS [738-70-5]



DANGER
H302-H360 ♦ EINECS 212-006-2 ♦ WGK 2 ♦ HS 29335995
Storage temperature +2 °C to +8 °C

Antibacterial substance; activity *in vitro* (1). Simultaneous detection with sulfamethazine by HPLC (2). Inhibitor of the bacterial enzyme dihydrofolate reductase.

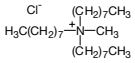
Assay (titr.)	98.5 - 101.0 %
Heavy metals (Pb)	max. 20 ppm

References:
1. Digranes, A. et al. (1985) Chemotherapy ***31,*** 466-71
2. Torel, J. et al. (1985) J. Chromatogr. ***323,*** 447-50

Cat.No.	Size
37049.01	5 g

Trioctylmethylammonium chloride pract.

(Methyltrioctyl ammonium chloride; Adogen 464; Aliquat® 336)



$C_{25}H_{54}ClN$ ♦ M_r 404.2 ♦ CAS [63393-96-4]

DANGER

H301-H315-H318-H410 ♦ GGVSE/ADR 6.1 III UN2810 ♦ IATA 6.1 III UN2810 ♦ EINECS 264-120-7 ♦ WGK 3S ♦ HS 29239000

Suitable for use as a phase transfer catalyst. It has a major application as a metal extraction reagent for cadmium, zinc, iron and rare earth metals.

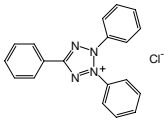
Assay min. 85.0 %

Aliquat is a registered trademark of Cognis Corporation

Cat.No.	Size
37076.02	500 ml

Triphenyltetrazolium chloride analytical grade

(TTC; Tetrazolium Red; 2,3,5-Triphenyl-2H-tetrazolium chloride)



$C_{19}H_{15}ClN_4$ ♦ M_r 334.79 ♦ CAS [298-96-4]

WARNING

H315-H319-H335 ♦ EINECS 206-071-6 ♦ HS 29339980

Used in biochemistry to measure the activity of dehydrogenases and in vital staining to detect living cells through the reduction of the colourless, water-soluble tetrazolium dye to a deep red, water-insoluble formazan via the dehydrogenases of the respiratory chain. Furthermore, it can be used in microbiology to distinguish between coliform and noncoliform bacteria, to measure the bacterial content of liquids in food analysis and/or to determine seed vitality.

Purity (HPLC) min. 99.0 %

Cat.No.	Size
37130.03	10 g
37130.02	50 g

TRIS

see 37190 Tris(hydroxymethyl)aminomethane, page 151

Tris-(2-carboxyethyl)phosphine hydrochloride

(TCEP)

$C_9H_{16}ClO_6P$ ♦ M_r 286.7 ♦ CAS [51805-45-9]

DANGER

H314 ♦ GGVSE/ADR 8 II UN3261 ♦ IATA 8 II UN3261 ♦ WGK 1 ♦ HS 29420000

Storage temperature +2 °C to +8 °C

Water-soluble and odorless reagent for selective and fast reduction of disulfides. Does not react with other functional groups of proteins. Unreactive towards many common alkylating reagents, so reductions have been carried out simultaneously with alkylations. More stable and effective than DTT. The strength of the phosphorus-oxygen bond makes the reaction irreversible. Dilute solutions of TCEP (1 mM) react rapidly at room temperature. Suitable also in mass spectrometry applications.

Assay (titr.) 98.0 – 102.0 %

References:

1. Kirkley, T.L. (1989) Anal. Biochem. ***180***, 231-36
2. Burns, J.A. (1991) J. Org. Chem. ***56***, 2648-50
3. Han, J. a. Han, G.Y. (1994) Anal. Biochem. ***220***, 5-10

Cat.No.	Size
36970.01	1 g
36970.02	5 g
36970.03	10 g

Tris-Buffered Saline

see 42596 TBS Buffer (10x), page 146

Tris-Glycine/SDS Sample Buffer

see 42527 SERVA Tris-Glycine/SDS Sample Buffer (2x), page 123

Tris-Tricine/SDS Running Buffer

see 42552 SERVA Tris-Tricine/SDS Electrophoresis Buffer (10x), page 123

Tris Buffer pH 7.5, 1 M solution molecular biology grade

WGK 2 ♦ HS 38220000

DNase, RNase, Protease not detected. The pH value of Tris buffer is temperature and concentration dependent. For Tris buffers, pH increases about 0.03 unit per degree C decrease in temperature, and decreases 0.03 - 0.05 unit per ten-fold dilution.

Composition:

Tris (cat. no. 37180)	121.14 g/l
pH (20 °C, adjusted with HCl)	7.5 ± 0.1

Cat.No.	Size
39791.01	1 L

Tris Buffer pH 8.0, 1 M solution molecular biology grade

WGK 2 ♦ HS 38220000

DNase, RNase, Protease not detected. The pH value of Tris buffer is temperature and concentration dependent. For Tris buffers, pH increases about 0.03 unit per degree C decrease in temperature, and decreases 0.03 - 0.05 unit per ten-fold dilution.

Composition:

Tris (cat. no. 37186)	121.14 g/l
pH (20 °C, adjusted with HCl)	8.0 ± 0.1

Cat.No.	Size
39792.01	1 L

Tris Buffer pH 8.8, 1 M solution molecular biology grade

WGK 2 ♦ HS 38220000

DNase, RNase, Protease not detected. The pH value of Tris buffer is temperature and concentration dependent. For Tris buffers, pH increases about 0.03 unit per degree C decrease in temperature, and decreases 0.03 - 0.05 unit per ten-fold dilution.

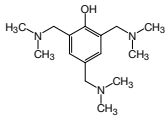
Composition:

Tris (cat. no. 37186)	121.14 g/l
pH (20 °C, adjusted with HCl)	8.8 ± 0.1

Cat.No.	Size
39794.01	1 L

2,4,6-Tris(dimethylaminomethyl)phenol pract.

(EPON accelerator DMP-30; ARALDITE® Accelerator DY 964)



$C_{15}H_{27}N_3O$ ♦ M_r 265.4 ♦ CAS [90-72-2]

WARNING

H302-H315-H319 ♦ EG-Index 603-069-00-0 ♦ EINECS 202-013-9 ♦ WGK 1L ♦ HS 29215990

Accelerator for epoxy polymerization.
Curing catalyst for epoxy resins. It is used as the accelerator in glycid ether 100 embedding in electron microscopy.

Density (20 °C) 0.96 - 1.0

Cat.No.	Size
36975.01	100 ml
36975.03	250 ml

Tris(hydroxymethyl)aminomethane electrophoresis grade

(TRIS; THAM; Trometamol; Tromethamine; 2-Amino-2-(hydroxymethyl)-1,3-propanediol)

$C_4H_{11}NO_3$ ♦ M_r 121.1 ♦ CAS [77-86-1]

WARNING

H315-H319 ♦ EINECS 201-064-4 ♦ HS 29221985

Ultrapure quality, tested for use in electrode buffers for PAGE and in transfer buffers for Western Blots.

Assay (titr.)	min. 99.9 %
A 1 cm 10 % in water	
235 nm	max. 0.60
260 nm	max. 0.15
280 nm	max. 0.15
430 nm	max. 0.07
Heavy metals (Pb)	max. 1 ppm
pH (5 % in water)	10.0 – 11.5

Cat.No.	Size
37181.01	500 g
37181.02	1 kg
37181.03	2,5 kg

Tris(hydroxymethyl)aminomethane analytical grade, USP

(TRIS; THAM; Trometamol; Tromethamine;
2-Amino-2-(hydroxy-methyl)-1,3-propanediol)
$C_4H_{11}NO_3$ ♦ M_r 121.1 ♦ CAS [77-86-1]

WARNING
H315-H319 ♦ EINECS 201-064-4 ♦ WGK 2L ♦ HS 29221985

Ultrapure buffer quality for biological and enzymatic research with very low UV absorption. As well suitable for pharmaceutical research.

Assay (titr.)	min. 99.9 %
A 1 cm/10 % in water	
235 nm	max. 0.60
260 nm	max. 0.15
280 nm	max. 0.15
430 nm	max. 0.07
Heavy metals (Pb)	max. 10 ppm
pH (5 % in water)	10.0 - 11.5

Cat.No.	Size
37180.02	100 g
37180.03	500 g
37180.05	1 kg
37180.04	2,5 kg

Tris(hydroxymethyl)aminomethane molecular biology grade

(TRIS; THAM; Tromethamine; 2-Amino-2-(hydroxymethyl)-
1,3-propanediol)
$C_4H_{11}NO_3$ ♦ M_r 121.1 ♦ CAS [77-86-1]

WARNING
H315-H319 ♦ EINECS 201-064-4 ♦ WGK 2L ♦ HS 29221985

Ultrapure buffer quality for sensitive assays in molecular biology with very low UV absorption, DNase, RNase, Protease not detected.

Assay (titr.)	min. 99.9 %
Heavy metals (Pb)	max. 10 ppm
Iron	max. 1 ppm
Arsenic (As)	max. 1 ppm
Magnesium (Mg)	max. 1 ppm

Cat.No.	Size
37186.02	500 g
37186.03	1 kg
37186.04	2,5 kg

Tris(hydroxymethyl)aminomethane research grade, USP

(TRIS; THAM; Tromethamine; 2-Amino-2-(hydroxymethyl)-
1,3-propanediol)
$C_4H_{11}NO_3$ ♦ M_r 121.1 ♦ CAS [77-86-1]

WARNING
H315-H319 ♦ EINECS 201-064-4 ♦ WGK 2L ♦ HS 29221985

Buffer substance for all standard applications, suitable for preparative purposes and for chromatography.

Assay (titr.)	min. 99.0 %
A 1 cm/40 % in water	
290 nm	max. 0.2
pH (5 % in water)	10.0 - 11.5
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
37190.01	250 g
37190.02	1 kg
37190.03	5 kg

Tris(hydroxymethyl)aminomethane·hydrochloride molecular biology grade

(Tris·hydrochloride)
$C_4H_{11}NO_3$·HCl ♦ M_r 157.6 ♦ CAS [1185-53-1]

WARNING
H315-H319-H335 ♦ EINECS 214-684-5 ♦ WGK 1 ♦ HS 29221985

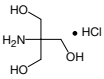
Ultrapure buffer quality for molecular biology with low UV absorption, DNase, RNase, Protease not detected.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
230 nm	max. 0.1
260 nm	max. 0.05
280 nm	max. 0.03
Heavy metals (as Pb)	max. 10 ppm
pH 10 % in water	3.5 - 5.0

Cat.No.	Size
39787.01	500 g

Tris(hydroxymethyl)aminomethane·hydrochloride research grade

(Tris·hydrochloride)
$C_4H_{11}NO_3$·HCl ♦ M_r 157.6 ♦ CAS [1185-53-1]



WARNING
H315-H319-H335 ♦ EINECS 214-684-5 ♦ WGK 1 ♦
HS 29221985

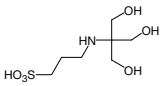
Ultrapure buffer quality for biochemistry and enzymology with low UV absorption.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
230 nm	max. 0.1
260 nm	max. 0.05
280 nm	max. 0.03
Heavy metals (Pb)	max. 10 ppm
pH (10 % in water)	3.5 - 5.0

Cat.No.	Size
37192.01	100 g
37192.02	500 g

N-Tris(hydroxymethyl)methyl-3-aminopropane sulfonic acid analytical grade

(TAPS)
$C_7H_{17}NO_6S$ ♦ M_r 243.28 ♦ CAS [29915-38-6]



EINECS 249-954-1 ♦ WGK 1 ♦ HS 29221985

MP 238 - 245 °C (dec.). pKa 20 = 8.4. Buffering substance.

Assay (titr.)	min. 99.0 %
A 1 cm/10 % in water	
230 nm	max. 0.2
260/280 nm	max. 0.07
Heavy metals (Pb)	max. 10 ppm
pH (10 % in water)	4.5 - 6.5

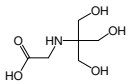
References:

1. Good, N.E. & Izawa, S. (1972) Methods Enzymol. ***24***, 53-68

Cat.No.	Size
37194.04	250 g

N-Tris(hydroxymethyl)methylglycine analytical grade

(Tricine)
$C_6H_{13}NO_5$ ♦ M_r 179.17 ♦ CAS [5704-04-1]



EINECS 227-193-6 ♦ WGK 1 ♦ HS 29225000

MP 179 - 187 °C; pKa 20 = 8.15. Buffering substance (1). Non-toxic substitute for barbital (2).

Assay (titr.)	min. 99.0 %
A 1 cm/0.1 M in water	
260 nm	max. 0.04
280 nm	max. 0.02
pH 10 % in water	4.6 - 5.2
Heavy metals (Pb)	max. 5 ppm
Iron (Fe)	max. 5 ppm

References:
1. Good, N.E. et al. (1966) Biochemistry ***5,*** 467-77
2. Monthony, J.F. et al. (1978) Clin. Chem. ***24,*** 1825-7

Cat.No.	Size
37195.03	500 g

Tris(hydroxymethyl)methylglycine electrophoresis grade

(Tricine)
$C_6H_{13}NO_5$ ♦ M_r 179.17 ♦ CAS [5704-04-1]

EINECS 227-193-6 ♦ HS 29221985

In the Tricine gel system developed by Schaegger and von Jagow (1), Tricine replaces glycine in the running buffer. This results in higher resolution of low molecular weight proteins and of smaller peptides.
Ultrapure quality, tested for use in electrode buffers for PAGE.

Assay (titr.)	min. 99.0 %
A 1 cm/0.1 M in water	
260 nm	max. 0.04
280 nm	max. 0.02
Heavy metals (Pb)	max. 5 ppm
pH (10 % in water)	4.6 – 5.2

References:
1. Schagger, H & von Jagow, G. V. (1987) Anal. Biochem. ***166***, 368 - 379

Cat.No.	Size
37196.01	100 g
37196.02	500 g

Triton® X-100

(Octylphenol-polyethylene glycol ether, n ca. 10)
CAS [9036-19-5]

DANGER
H302-H318-H412 ♦ WGK 2 ♦ HS 34021300

HLB 13.5. For the turbidimetric determination of phosphate (1). Can be used in place of Nonidet NP-40. One of the most frequently used surfactants for the isolation, purification and analysis of membrane components. Suitable for solubilization of hydrophobic proteins prior to Blue Native PAGE.

Water (KF)	max. 1.0 %
A 1 cm /320 nm 1 % in water	max. 0.4
A 1 cm /360 nm 1 % in water	max. 0.04

® Registered trademark of Union Carbide.

References:
1. Eibl, H. & Lands, W.E.M. (1969) Anal. Biochem. ***30,*** 51-7
2. See, Y.P. & Fitt, P.S. (1972) Anal. Biochem. ***49,*** 430-35
3. Campoy, F.J. et al. (1989) Biochem. Soc. Trans. ***17,*** 676-7
4. Gonzales-Manas, J.M. et al. (1990) Eur. J. Biochem. ***188,*** 673-8
5. Bayens, W.R.G. et al. (1990) Anal. Chim. Acta ***234,*** 187-92
6. Krause, F. (2006) Electrophoresis ***27***, 2759-81

Cat.No.	Size
37240.01	500 g
37240.02	5 kg

Triton® X-100 molecular biology grade

(Octylphenol-polyethylene glycol ether, n ca. 10)
CAS [9036-19-5]

DANGER
H302-H318-H412 ♦ WGK 2 ♦ HS 34021300

DNase, RNase, Protease, Phosphatase not detected.
HLB 13.5.

® *Registered trademark of Union Carbide*

Cat.No.	Size
39795.01	50 ml
39795.02	250 ml

Triton® X-100 for scintillation techniques

(Octylphenol-polyethylene glycol ether, n ca. 10)
CAS [9036-19-5]

DANGER
H302-H318 ♦ WGK 2 ♦ HS 34021300

HLB 13.5.

Water (KF)	max. 1.0 %
A 1 cm /320 nm 1 % in water	max. 0.4
A 1 cm /360 nm 1 % in water	max. 0.04

® *Registered trademark of Union Carbide*

Cat.No.	Size
37238.01	500 g
37238.02	2,5 kg

Trometamol

see 37181 Tris(hydroxymethyl)aminomethane, page 150
see 37180 Tris(hydroxymethyl)aminomethane, page 151

Tromethamine

see 37180 Tris(hydroxymethyl)aminomethane, page 151

Tromethamine

see 37181 Tris(hydroxymethyl)aminomethane, page 150

Trypsin 1:250 from porcine pancreas lyophil.

3.4.21.4 ♦ CAS [9002-07-7]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-010-00-7 ♦ EINECS 232-650-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Serin protease mixture suitable for cell culture. Contains chymotrypsin and non-proteolytic activities. Trypsin 1:250 is a special blend of enzymes designed to maintain maximum cell viability during gentle dissociation.
Customary concentration for use: 250 mg/100 ml, pH 7 – 8.
Trypsin assay: 250 NF/USP U/mg.

Cat.No.	Size
37292.01	25 g
37292.02	100 g

Trypsin from porcine pancreas ca. 60 U/mg

2 x cryst. lyophil. salt-free

EC 3.4.21.4 ♦ M_r ca. 24 000 ♦ CAS [9002-07-7]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-010-00-7 ♦ EINECS 232-650-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

Highly active enzyme preparation, e.g. suitable for assessing crystallization by membrane-based techniques, to determine protein folding rates.

Unit definition: 1 U catalyzes the hydrolysis of 1 µmole N-α-benzoyl-L-arginine ethyl ester (BAEE) per minute at 25 °C, pH 8.0.

Extraneous activities: max. 0.25 % chymotrypsin.

Cat.No.	Size
37291.03	1 g

Trypsin inhibitor from bovine lung

see 13718 Aprotinin from bovine lung, page 13

Trypsin inhibitor from soybean min. 13 000 U/mg lyophil.

M_r ca. 22 000 ♦ CAS [9035-81-8]

EINECS 232-906-9 ♦ WGK 1 ♦ HS 35040090
Storage temperature +2 °C to +8 °C

Salt-free. Trypsin is inhibited in a molar ratio of 1:1. Inhibits as well chymotrypsin (2), plasmin, kallikrein, thrombin and other proteolytic enzymes.

Unit definition: 1 IU (inhibitor units) inhibits 1 U trypsin as defined by cleavage of 1 µmole BAEE (N-benzoyl-L-arginine ethyl ester) per minute.

References:
1. Rachis, J.J. et al. (1962) Arch. Biochem. Biophys. ***98***, 471-8
2. Bidlingmeyer, U. et al. (1972) Biochemistry ***11***, 3303-10

Cat.No.	Size
37329.01	250 mg

Trypsin MS approved, from porcine pancreas

EC 3.4.21.4 ♦ CAS [9002-07-7]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-010-00-7 ♦
EINECS 232-650-8 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Trypsin MS approved is suitable for digestion of proteins for mass spectrometry analysis. Reductive methylation of the lysine residues of trypsin results in a stable product that is extremely resistant to autolytic degradation. Trypsin MS approved is purified by chromatography. No chymotryptic activity is detectable. Every lot is approved for use in in-gel digestion and mass spectrometry analysis. Specificity verified by digestion of oxidized B-chain of insulin.
A Trypsin Peptide (TP) Standard is available separately (cat. no. 37285) allowing internal calibration for enhancing mass accuracy. The TP standard provides tryptic activity to generate masses m/z 842 and 2211.

- Each lot is QC-tested by MS
- Modified by reductive methylation
- Source: Porcine pancreas
- Premium purity, superior stability

Cat.No.	Size
37286.01	100 µg
37286.02	150 µg
37286.03	1 mg
37286.04	4 x 25 µg

Trypsin Premium Grade, MS approved from porcine pancreas

EC 3.4.21.4 ♦ M_r ca. 24 000 ♦ CAS [9002-07-7]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-010-00-7 ♦
EINECS 232-650-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Approved for use in in-gel digestion and mass spectrometry analysis. Modified by reductive methylation, no chymotryptic activity detectable. Specificity verified by digestion of oxidized B-chain of insulin.

Trypsin Premium Grade, MS approved is suitable for digestion of proteins for mass spectrometry analysis. Reductive methylation of the lysine residues of trypsin results in a stable product that is extremely resistant to autolytic degradation. Trypsin Premium Grade, MS approved is purified by chromatography. No chymotryptic activity is detectable. Every lot is approved for use in in-gel digestion and mass spectrometry analysis. Each package contains also a Trypsin Peptide (TP) Standard allowing internal calibration for enhancing mass accuracy. The TP standard provides tryptic activity to generate masses m/z 842 and 2211.

Cat.No.	Size
37284.01	4 x 25 µg

Trypsin Sequencing Grade, modified from porcine pancreas

EC 3.4.21.4 ♦ M_r ca. 24 000 ♦ CAS [9002-07-7]

DANGER
H315-H319-H334-H335 ♦ EG-Index 647-010-00-7 ♦
EINECS 232-650-8 ♦ WGK 1 ♦ HS 35079090
Storage temperature -15 °C to -25 °C

Modified by reductive methylation, no chymotryptic activity detectable. Specificity verified by digestion of oxidized B-chain of insulin.

Trypsin Sequencing Grade, modified, is suitable for digestion of proteins for mass spectrometry analysis. Reductive methylation of the lysine residues results in a stable product that is extremely resistant to autolytic degradation. Trypsin Sequencing Grade, modified, is purified by chromatography.
No chymotryptic activity is detectable.
Each package contains also a Trypsin Peptide (TP) Standard allowing internal calibration for enhancing mass accuracy. The TP standard provides tryptic activity to generate masses m/z 842 and 2211.

Cat.No.	Size
37283.01	4 x 25 µg
37283.02	100 µg
37283.03	1 mg

Tryptone from casein pancreatic

HS 35040090

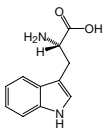
Prepared by pancreatic digest of milk protein casein. Very rich source of amino nitrogen.
Used in the production of various general media such as Tryptone Water etc. and as well in the production of sterility testing media and various diagnostic media.

Total nitrogen (TN)	12.5 – 13.5 %
Amino nitrogen (AN)	3.5 – 4.5 %
AN/TN x 100	26 – 37
pH (2 % solution)	6.5 – 7.5

Cat.No.	Size
48647.01	250 g
48647.02	1 kg

L-Tryptophan research grade, Ph. Eur.

(Trp; L-2-Amino-3-(indolylepropionic acid))
$C_{11}H_{12}N_2O_2$ ♦ M_r 204.2 ♦ CAS [73-22-3]



EINECS 200-795-6 ♦ WGK 1L ♦ HS 29224985

Assay (titr.)	98.5 - 101.0 %

Cat.No.	Size
37422.02	25 g
37422.03	100 g
37422.04	500 g

TTC

see 37130 Triphenyltetrazolium chloride, page 150

Tube Adaptor

Cat.No.	Size
HPE-NW12	1 piece

Tween® 20 molecular biology grade

(Polysorbate 20; Polyoxyethylene sorbitan monolaureate, n ca. 20)
M_r ca. 1200 ♦ CAS [9005-64-5]

EINECS 500-018-3 (NLP) ♦ WGK 1L ♦ HS 34021300

DNase/RNase not detected. HLB 16.7.

Heavy metals	max. 10 ppm
Water	max. 3.0 %

® *Registered trademark of ICI, Ltd.*

Cat.No.	Size
39796.01	100 ml

Tween® 20 pure, Ph. Eur., USP

(Polysorbate 20; Polyoxyethylene sorbitan monolaureate, n ca. 20)
M_r ca. 1200 ♦ CAS [9005-64-5]

EINECS 500-018-3 ♦ WGK 1L ♦ HS 34021300

HLB 16.7. Non-ionic surfactant that effectively suppresses unspecific reactions between antibodies, antigens and other molecules (1, 2). Also used as a solubilizer in membrane chemistry (3) and for density centrifugation of viruses (4).

Free dioxane	max. 1 ppm
Free ethylene oxide	max. 1 ppm
Heavy metals	max. 10 ppm
Non animal origin	

® *Registered trademark of ICI, Ltd.*

References:

1. Thean, E.T. & Toh, B.H. (1989) Anal. Biochem. ***177,*** 256-8
2. Tovey, E.R. et al. (1989) Electrophoresis ***10,*** 243-9
3. Lund, S. et al. (1989) J. Biol. Chem. ***264,*** 4907-15
4. Boeye, A. & DeRees, A. (1989) Arch. Virol. ***107,*** 77-84

Cat.No.	Size
37470.01	500 g
37470.02	5 kg

Tween® 80 pure, Ph. Eur., USP/NF

(Polysorbate 80; Polyoxyethylene sorbitan monooleate, n ca. 20)
M_r ca. 1300 ♦ CAS [9005-65-6]

EINECS 500-019-9 ♦ WGK 1L ♦ HS 34021300

HLB 15.0; tested for use in tissue culture.

Density (25 °C)	1.06 - 1.09
Ethylene oxide value	max. 1 ppm
1,4-Dioxane content	max. 10 ppm
Heavy metals	max. 10 ppm
Non animal origin	

® *Registered trademark of ICI, Ltd.*

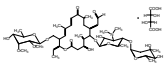
References:

1. Sato, M. et al. (1989) Int. J. Biochem. ***21,*** 751-4
2. Masaki, S. et al. (1990) Microbiol. Immunol. ***34,*** 653-63
3. Okuno, S. & Fujisawa, H. (1990) Biochim. Biophys. Acta ***1038***, 204-8

Cat.No.	Size
37475.01	500 g
37475.02	5 kg

Tylosine·tartrate solution (100x) sterile filtered

(Anti-PPLO-agent)
HS 38220000
Storage temperature -15 °C to -25 °C



Macrocyclic antibiotic with large lactone ring. Inhibits bacterial protein synthesis at the ribosomal 50S-subunit. Acts bacteriostatic, in higher concentrations as well bactericidal. Active against gram positive bacteria and mycoplasma. Enhances immune response in chicken.

References:

1. Stewart, S.M. et al. (1969) J. Med. Microbiol. ***2,*** 287-92.
2. Baba, T. et al. (1998) Poult. Sci. ***77***, 1306-11
3. Loftin, K.A. et al. (2005) Environm. Toxicol. Chem. ***24***, 782-8

Cat.No.	Size
47988.01	25 ml

Uranyl acetate·2H_2O research grade

$(CH_3COO)_2UO_2 \cdot 2H_2O$ ♦ M_r 424.2 ♦ CAS [6159-44-0]

DANGER
H300-H330-H373-H411 ♦ MAK/TRK 0,25 mg/m³ calculated as uran ♦ EG-Index 092-002-00-3 ♦ GGVSE/ADR 7 UN2910 ♦ IATA 7 UN2910 ♦ WGK 3L ♦ HS 28443019

For determination of unbound radioactive iodine in radiolabelled glycoproteins. For positive staining in electron microscopy.

Assay (titr.)	min. 98.0 %
Chloride (Cl)	max. 0.003 %
Lead (Pb)	max. 0.002 %

Export restricted. Please ask for details.

References:

1. Boratyniski, J. (1987) Anal. Biochem. ***160,*** 35-8

Cat.No.	Size
77870.02	5 g
77870.01	25 g

Urea analytical grade, Ph. Eur., USP

(Carbamide; Carbonyl diamide)
CH_4N_2O ♦ M_r 60.06 ♦ CAS [57-13-6]

EINECS 200-315-5 ♦ WGK 1L ♦ HS 29241900

A chaotropic agent used for the denaturation of proteins and as a mild solubilization agent for insoluble or denatured proteins. May be used with guanidine hydrochloride and dithiothreitrol (DTT) in the refolding of denatured proteins into their native or active form.
In denaturing isoelectric focusing and 2D-electrophoresisused utilized to solubilize and denature proteins.
Suitable for pharmaceutical research

Assay (from N)	99.0 - 100.5 %
Heavy metals (Pb)	< 10 ppm

Cat.No.	Size
24524.02	1 kg
24524.03	5 kg

Urea electrophoresis grade

(Carbamide; Carbonyl diamide)
CH_4N_2O ♦ M_r 60.06 ♦ CAS [57-13-6]

EINECS 200-315-5 ♦ HS 29241900

For complete solubilization and unfolding of proteins, urea is included in the sample solution for 2D PAGE at a concentration of at least 8 M. It is also used to denature nucleic acids in sequencing gels. Application-tested quality.

Assay (from N)	99.0 - 100.5 %
Heavy metals	< 10 ppm

Cat.No.	Size
24525.01	250 g
24525.02	1 kg

Urea molecular biology grade

(Carbamide; Carbonyl diamide)
CH_4N_2O ♦ M_r 60.06 ♦ CAS [57-13-6]

EINECS 200-315-5 ♦ WGK 1L ♦ HS 29241900

For all molecular biology applications, DNase/RNase not detected.
A chaotropic agent used for the denaturation of proteins and as a mild solubilization agent for insoluble or denatured proteins.

Assay (from N)	99.0 - 100.5 %
A 1 cm/8 M in water	
260 nm	< 0.15
280 nm	< 0.1
Heavy metals (as Pb)	< 10 ppm
Iron (Fe)	max 0.5 ppm

Cat.No.	Size
39305.01	500 g

Urease from jack bean min. 220 U/mg lyophil.

(Urea amidohydrolase)
EC 3.5.1.5 ♦ M_r ca. 545 000 ♦ CAS [9002-13-5]

DANGER
H334 ♦ EINECS 232-656-0 ♦ HS 35079090
Storage temperature +2 °C to +8 °C

For the determination of urea (1).

Unit definition: 1 U catalyzes the formation of 1 µmole ammonia per minute at 25 °C, pH 8.0 from urea, determined in a coupled reaction with GLDH (2).

Activity in other units: If the unit of activity is defined in terms of 1 µmole urea decomposed per minute, this preparation would contain at least 90 units/mg.

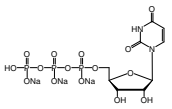
References:

1. Kerscher, L. & Ziegenhorn, J. (1985) Methods of Enzymatic Analysis (Bergmeyer, H.U., ed.) 3rd Ed. Vol. ***8,*** p. 444-53
2. Kaltwasser, H. & Schlegel, H.G. (1966) Anal. Biochem. ***16,*** 132-8

Cat.No.	Size
37799.01	100 mg
37799.03	1 g

Uridine-5'-triphosphate·Na_3-salt research grade

(UTP)
$C_9H_{12}N_2O_{15}P_3 \cdot Na_3 \cdot 2H_2O$ ♦ M_r 586.2 ♦ CAS [19817-92-6]



EINECS 243-347-5 ♦ HS 29199000
Storage temperature -15 °C to -25 °C

Used in studies on nucleic acid biosynthesis and cell signalling.

Assay (HPLC)	min. 91.0 %
Heavy metals (Pb)	max. 10 ppm

Cat.No.	Size
37960.01	250 mg
37960.02	1 g

UTP

see 37960 Uridine-5'-triphosphate·Na_3-salt, page 155

UV Filter (58 mm) for DIAS-III

HS 90275000

Cat.No.	Size
UV-58	1 piece

UV Protection Lid, for SERVA UV Table CII

HS 90275000

Cat.No.	Size
UVPL-CII	1 piece

UV Replacement Bulbs, for BlueCube 300

HS 90275000

Cat.No.	Size
BC-RB	4 pieces

UV to Blue Light Converter Screen

HS 90278017

Converter plate for conversion of UV light into blue light. The combination of this low-cost plate with a UV transilluminator replaces an extra blue light table, e.g. for the documentation of SERVA DNA Stain Clear G stained DNA gels.
Outer dimensions: 33.5 cm x 27 cm
Filter glass dimensions: 29 cm x 24,5 cm

Cat.No.	Size
UV-BLC	1 piece

UV to White Light Converter Screen

HS 90278017

Converter plate for conversion of UV light into visible light. The combination of this low-cost plate with a UV transilluminator replaces an extra white light table, e.g. for the documentation of Coomassie-stained protein gels or autoradiographs.
Outer dimensions: 33.5 cm x 27 cm
Filter glass dimensions: 29 cm x 24.5 cm

Cat.No.	Size
UV-WLC	1 piece

UV Transparent Gel Tray, for BM-200, 15 cm x 15 cm

Gel width 15 cm

HS 90279050

UV transparent gel tray (15 x 15 cm) for BlueMarine™ 200.
Incl. 2 gel casting gates for leak-free sealing.

Cat.No.	Size
BM-200-15-2	1 piece

UV Transparent Gel Tray, for BM-200, 20 cm x 15 cm

Gel width 15 cm

HS 90279050

UV transparent gel tray (15 x 20 cm) for BlueMarine™ 200. Incl. 2 gel casting gates for leak-free sealing.

Cat.No.	Size
BM-200-20-2	1 piece

UV Transparent Gel Tray, for BlueMarine 100, 7 cm x 10 cm, Gel width 7 cm

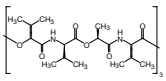
HS 90271090

UV transparent gel tray (7 x 10 cm) for BlueMarine™ 100. Incl. 2 gel casting gates for leak-free sealing.

Cat.No.	Size
BM-100-21	1 piece

Valinomycin research grade

(cyclo(Lac-Val-D-Hiv-D-Val-Lac-Val-D-Hiv-D-Val-Lac-Val-D Hiv-D-Val))



$C_{54}H_{90}N_6O_{18}$ ♦ M_r 1111.3 ♦ CAS [2001-95-8]

DANGER
H300-H310-H330 ♦ GGVSE/ADR 6.1 I UN2811 ♦ IATA 6.1 I UN2811
EINECS 217-896-6 ♦ WGK 3L ♦ HS 29419000

Cyclopeptide-antibiotic. Affects potassium permeability of biomembranes. D-HIV = Hydroxy-isovaleric acid, Lac = lactic acid.

Assay (HPLC) 93.0 - 100.0 %

References:
1. Höfer, M. & Pressman, B.C. (1966) Biochemistry ***5,*** 3919-25
2. Davidson, G.A. & Berman, M.C. (1985) J. Biol. Chem. ***260,*** 7325
3. Eytan, G.D. et al. (1990) J. Biol. Chem. ***265,*** 12949

Cat.No.	Size
38076.02	10 mg

Versene disodium

see 11280 Ethylenediamine tetraacetic acid·Na_2-salt, page 46

Videoprinter Thermopaper

HS 90275000

Cat.No.	Size
K-65HM	4 rolls

VISKING dialysis tubing, MWCO 12 000 - 14 000

RC, diameter 6 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	ca. 25 Å
Nominal dry flat width	10 mm
Nominal dry diameter	6 mm
Approx. filling volume	0.3 ml/cm
Nominal dry wall thickness	51 µm

Cat.No.	Size
44104.01	5 m
44104.02	30 m

VISKING dialysis tubing, MWCO 12 000 - 14 000

RC, diameter 16 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	ca. 25 Å
Nominal dry flat width	25 mm
Nominal dry diameter	16 mm
Approx. filling volume	2.0 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44110.01	5 m
44110.02	30 m
44110.04	152 m

VISKING dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 21 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	ca. 25 Å
Nominal dry flat width	34 mm
Nominal dry diameter	21 mm
Approx. filling volume	3.4 ml/cm
Nominal dry wall thickness	23 µm

Cat.No.	Size
44114.01	5 m
44114.02	30 m

VISKING dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 28 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	ca. 25 Å
Nominal dry flat width	44 mm
Nominal dry diameter	28 mm
Approx. filling volume	6.4 ml/cm
Nominal dry wall thickness	20 µm

Cat.No.	Size
44120.01	5 m
44120.02	30 m
44120.05	152 m

VISKING dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 49 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	ca. 25 Å
Nominal dry flat width	77 mm
Nominal dry diameter	49 mm
Approx. filling volume	18 ml/cm
Nominal dry wall thickness	41 µm

Cat.No.	Size
44126.02	15 m
44126.03	152 m

VISKING dialysis tubing, MWCO 12 000 - 14 000
RC, diameter 75 mm

HS 39173200

Packed dry, made from regenerated cellulose (RC). With glycerol as protection for embrittlement, which can be easily removed by soaking in water. Contain low level of heavy metal and sulfide impurities. Highly resistant against chemicals, suitable for pH range 2 – 12 and temperatures 4 – 60 °C.

Pore diameter	ca. 25 Å
Nominal dry flat width	117 mm
Nominal dry diameter	75 mm
Approx. filling volume	45.8 ml/cm
Nominal dry wall thickness	74 µm

Cat.No.	Size
44130.01	5 m
44130.02	15 m
44130.03	152 m

VitalStain Blue 520 for flow cytometry

HS: 38220000
Storage temperature -15 °C to -25 °C

Fixable viability dyes allow accurate discrimination between live and dead cells in flow cytometric analysis, based on cell membrane integrity. The exclusion of dead cells from data allows a better identification of cell populations and provides an accurate determination of cell viability within samples.

VitalStain Blue 520 allows staining of live cells and preserve the staining pattern after fixation and/or permeabilization.

VitalStains fixable viability dyes are amine reactive and cell impermeable. Dead cells with compromised cell membranes are typically labelled to a higher extend due to reaction with intracellular amines resulting in highly fluorescent dead cells. Impermeable live cells are labelled only on the cell surface and show dim fluorescence.

VitalStain Blue 520 is excited by the blue 488 nm laser and bright fluorescence is detected in the FITC channel.

- High brightness for optimal differentiation between live and dead cells
- Ready-to-use kit, DMSO pre-diluted to test size formulation
- Unlike 7-AAD and PI, labelled cells can be fixed, permeabilized, washed and stained
- Suitable for any cell species

Cat.No.	Size
59009.01	100 tests

VitalStain Red 660 for flow cytometry

HS: 38220000
Storage temperature -15 °C to -25 °C

Fixable viability dyes allow accurate discrimination between live and dead cells in flow cytometric analysis, based on cell membrane integrity. The exclusion of dead cells from data allows a better identification of cell populations and provides an accurate determination of cell viability within samples.

VitalStain Red 660 allows staining of live cells and preserve the staining pattern after fixation and/or permeabilization.

VitalStains fixable viability dyes are amine reactive and cell impermeable. Dead cells with compromised cell membranes are typically labelled to a higher extend due to reaction with intracellular amines resulting in highly fluorescent dead cells. Impermeable live cells are labelled only on the cell surface and show dim fluorescence.

VitalStain Red 660 is excited by the red 633 nm laser and bright fluorescence is detected in the red channel.

- High brightness for optimal differentiation between live and dead cells
- Ready-to-use kit, DMSO pre-diluted to test size formulation
- Unlike 7-AAD and PI, labelled cells can be fixed, permeabilized, washed and stained
- Suitable for any cell species

Cat.No.	Size
59010.01	100 tests

VitalStain Red 780 for flow cytometry

HS: 38220000
Storage temperature -15 °C to -25 °C

Fixable viability dyes allow accurate discrimination between live and dead cells in flow cytometric analysis, based on cell membrane integrity. The exclusion of dead cells from data allows a better identification of cell populations and provides an accurate determination of cell viability within samples.

VitalStain Red 780 allows staining of live cells and preserve the staining pattern after fixation and/or permeabilization.

VitalStains fixable viability dyes are amine reactive and cell impermeable. Dead cells with compromised cell membranes are typically labelled to a higher extend due to reaction with intracellular amines resulting in highly fluorescent dead cells. Impermeable live cells are labelled only on the cell surface and show dim fluorescence.

VitalStain Red 780 is excited by the red 633 nm laser and bright fluorescence is detected in the IR/APC channel.

- High brightness for optimal differentiation between live and dead cells
- Ready-to-use kit, DMSO pre-diluted to test size formulation
- Unlike 7-AAD and PI, labelled cells can be fixed, permeabilized, washed and stained
- Suitable for any cell species

Cat.No.	Size
59011.01	100 tests

VitalStain Violet 500 for flow cytometry

HS: 38220000
Storage temperature -15 °C to -25 °C

Fixable viability dyes allow accurate discrimination between live and dead cells in flow cytometric analysis, based on cell membrane integrity. The exclusion of dead cells from data allows a better identification of cell populations and provides an accurate determination of cell viability within samples.

VitalStain Violet 500 allows staining of live cells and preserve the staining pattern after fixation and/or permeabilization.

VitalStains fixable viability dyes are amine reactive and cell impermeable. Dead cells with compromised cell membranes are typically labelled to a higher extend due to reaction with intracellular amines resulting in highly fluorescent dead cells. Impermeable live cells are labelled only on the cell surface and show dim fluorescence.

VitalStain Violet 500 is excited by the violet 405 nm laser and bright fluorescence is detected in the FITC channel.

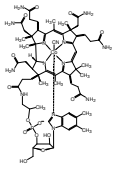
- High brightness for optimal differentiation between live and dead cells
- Ready-to-use kit, DMSO pre-diluted to test size formulation
- Unlike 7-AAD and PI, labelled cells can be fixed, permeabilized, washed and stained
- Suitable for any cell species

Cat.No.	Size
59008.01	100 tests

Vitamin B_1 hydrochloride

see 36020 Thiamine·HCl, page 148

Vitamin B_{12} cryst. pure, Ph. Eur., USP



(Cyanocobalamin; Extrinsic Factor; Antianemic vitamin B)
$C_{63}H_{88}N_{14}O_{14}PCo$ ♦ M_r 1355.4 ♦ CAS [68-19-9]

EINECS 200-680-0 ♦ WGK 1L ♦ HS 29362600
Storage temperature +2 °C to +8 °C

Assay (UV), dried	96.0 - 100.5 %

Non-animal origin.

Protect from light!

Cat.No.	Size
38310.02	500 mg

Vitamin C

see 14030 L-Ascorbic acid, page 15

Vitamin H

see 15060 (+)-Biotin, page 17

Water demineralized, sterile molecular biology grade

HS 28530010

DNase/RNase not detected. Autoclaved.

Cat.No.	Size
39800.01	500 ml

Water DEPC (0.1 %) treated, sterile molecular biology grade

HS 28530010

DNase/RNase not detected. Autoclaved.

Cat.No.	Size
39798.03	500 ml

Water for UHPLC-MS

CAS [7732-18-5]

EINECS 231-791-2 ♦ HS 28539010

Special grade for excellent performance in ultra high performance liquid chromatography-tandem mass spectrometry (UHPLC-MS/MS).

Conductivity	≤ 0.09 µS/cm
Total organic carbon	≤ 10 ppb
Acidity	≤ 0.0002 %
Alkalinity	≤ 0.00005 %
Residue on evaporation	≤ 0.4 ppm

Transmittance

200 nm	min. 95.0 %
230 nm	min. 99.0 %

UHPLC gradient peak

210 nm	max. 2 mAU
Drift at 210 nm	max. 8 mAU
Drift at 254 nm	max. 3 mAU

Test LC-MS TIC (50 – 2000 m/z)
ES I(+)

Sensitive impurities (reserpine)	max. 30 ppb

Metal Compounds

Na/K/Ca	max. 50 ppb
Al/Fe/Mg	max. 20 ppb

Microfiltered, 0.1 µm

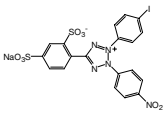
Cat.No.	Size
45637.02	1 L
45637.01	2,5 L

White Light Top Light for DIAS-III

HS 90275000

Cat.No.	Size
WL-II	1 piece

WST 1



(2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfophenyl)-2H-tetrazolium,Na-salt)
$C_{19}H_{11}JN_5O_8S_2Na$ ♦ M_r 651.35 ♦ CAS [150849-52-8]

WARNING
H302-H312-H315-H319-H332-H335 ♦
HS 29339980
Storage temperature +2 °C to +8 °C

Monotetrazolium salt which forms a water-soluble (>0.1 M) formazan upon reduction. Suitable for cell proliferation and cytotoxicity assays.
Keep dry and dark.

References:
1. Ishiyama, M. et al. (1993) Chem. Pharm. Bull. ***41,*** 1118
2. Ishiyama, M. et al. (1995) In vitro Toxicol. ***8,*** 187
3. Ishiyama, M. et al. (1995) Analyst ***120,*** 113

Cat.No.	Size
38391.01	25 mg
38391.02	100 mg

X-Gal

see 15243 5-Bromo-4-chloro-3-indolyl-β-D-galactoside (X-Gal), page 23

Xanthine oxidase from buttermilk ca. 0.9 U/mg protein
suspension

(XOD; Xanthine:oxygen oxidoreductase)
EC 1.1.3.22 ♦ M_r ca. 283 000

DANGER
H334 ♦ HS 35079090
Storage temperature +2 °C to +8 °C ✻

For the determination of xanthine and hypoxanthine (1), adenosine, guanosine (2) and total purines (3). Chromatographically purified; ca. 10 mg/ml in 60 % saturated ammonium sulfate containing sodium salicylate and EDTA.
5 mg correspond to approx. 0.5 ml.

Unit definition: 1 U catalyzes the oxidation of 1 µmole xanthine per minute at 25 °C, pH 7.5, measured by the increase in absorbance in 290 nm (4).

References:

1. Jensen, M.H. & Joergensen, S. (1985) Methods of Enzymatic Analysis (Bergmeyer, H.U., ed.) 3rd Ed. Vol. ***7,*** p. 125-33
2. Heinz, F. & Reckel, S. (1985) loc. cit. p. 92-100
3. Jensen, M.H. (1985) loc. cit. p. 101-10
4. Kalckar, H.M. (1947) J. Biol. Chem. ***167,*** 429-43

Cat.No.	Size
38418.01	5 mg

XOD
see 38418 Xanthine oxidase from buttermilk ca. 0.9 U/mg protein, page 158

Xpress Blotting Buffer (10x) for Western Blotting
HS 38220000

The Xpress Blotting Buffer is a ready-to-use buffer reagent for the fast and efficient semi-dry transfer of high and low molecular weight proteins in only 15 min. The buffer system is compatible with nitrocellulose and PVDF membranes. Sufficient for at least 40 vertical mini SDS PAGE gels.

Cat.No.	Size
42661.01	1 L

Xpress Blotting Kit for Western Blotting
HS 38220000

Kit for fast Semi-Dry Western Blotting of 10 vertical mini SDS PAGE gels.
SERVA Xpress Blotting Buffer is a ready-to-use buffer reagent for the fast and efficient semi-dry transfer of high and low molecular weight proteins in only 15 min.
The use of SERVA's newly developed Blotting Fleece instead of blotting paper allows an efficient, undisturbed transfer in a short time.The buffer system is compatible with nitrocellulose and PVDF membranes.

Content:
250 ml 10x SERVA Xpress Blotting Buffer
20x Blotting Fleece sheets (size 80 mm x 85 mm)
10x Connection Paper (size 80 mm x 85 mm)

Cat.No.	Size
42662.01	1 kit

Xpress NC Blotting Kit for Western Blotting
HS 38220000

Kit for fast Semi-Dry Western Blotting of 10 vertical mini SDS PAGE gels on nitrocellulose membrane.
SERVA Xpress Blotting Buffer is a ready-to-use buffer reagent for the fast and efficient semi-dry transfer of high and low molecular weight proteins in only 15 min. The use of SERVA's newly developed Blotting Fleece instead of blotting paper allows an efficient, undisturbed transfer in a short time.
The pre-cut nitrocellulose membrane sheets show high protein binding, low background and improved stability for easier handling and re-probing.

Content:
250 ml 10x SERVA Xpress Blotting Buffer
20x Blotting Fleece sheets (size 80 mm x 85 mm)
10x Connection Paper (size 80 mm x 85 mm)
10x Nitrocellulose membrane sheets, pore size 0.2 µm (size 80 mm x 85 mm)

Cat.No.	Size
42663.01	1 kit

Xpress PVDF Blotting Kit for Western Blotting
HS 38220000

Kit for fast Semi-Dry Western Blotting of 10 vertical mini SDS PAGE gels on PVDF membrane.
SERVA Xpress Blotting Buffer is a ready-to-use buffer reagent for the fast and efficient semi-dry transfer of high and low molecular weight proteins in only 15 min. The use of SERVA's newly developed Blotting Fleece instead of blotting paper allows an efficient, undisturbed transfer in a short time.
The pre-cut PVDF membrane sheets with the pore size of 0.2 µm show high protein binding and low background.

Content:
250 ml 10x SERVA Xpress Blotting Buffer
20x Blotting Fleece sheets (size 80 mm x 85 mm)
10x Connection Paper (size 80 m x 85 mm)
10x PVDF membrane sheets, pore size 0.2 µm (size 80 x 85 mm)

Cat.No.	Size
42664.01	1 kit

Xpress Micro Dialyzer MD100, MWCO 2 kDa 1 cartridge
HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip.

Cat.No.	Size
46088.01	8 pieces

Xpress Micro Dialyzer MD100, MWCO 2 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46089.01	1 kit

Xpress Micro Dialyzer MD100, MWCO 3.5 kDa

single fingers in microtube

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 single microdialysis devices in 2 ml microcentrifuge tube

Cat.No.	Size
46100.01	12 pieces

Xpress Micro Dialyzer MD100, MWCO 3.5 kDa 1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46103.01	8 pieces

Xpress Micro Dialyzer MD100, MWCO 3.5 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – detachable 8-device strips, scalable from 1 to 96 samples
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46104.01	1 kit

Xpress Micro Dialyzer MD100, MWCO 6 - 8 kDa

single fingers in microtube

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 single microdialysis devices in 2 ml microcentrifuge tube

Cat.No.	Size
46106.01	12 pieces

Xpress Micro Dialyzer MD100, MWCO 6 - 8 kDa 1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46109.01	8 pieces

Xpress Micro Dialyzer MD100, MWCO 6 - 8 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – detachable 8-device strips, scalable from 1 to 96 samples
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46110.01	1 kit

Xpress Micro Dialyzer MD100, MWCO 12 - 14 kDa
single fingers in microtube

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 single microdialysis devices in 2 ml microcentrifuge tube

Cat.No.	Size
46112.01	12 pieces

Xpress Micro Dialyzer MD100, MWCO 12 - 14 kDa
1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46115.01	8 pieces

Xpress Micro Dialyzer MD100, MWCO 12 - 14 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in a. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46116.01	1 kit

Xpress Micro Dialyzer MD100, MWCO 20 kDa 1 cartridge
HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46090.01	8 pieces

Xpress Micro Dialyzer MD100, MWCO 20 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46091.01	1 kit

Xpress Micro Dialyzer MD100, MWCO 140 kDa 1 cartridge
HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46092.01	8 pieces

Xpress Micro Dialyzer MD100, MWCO 140 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46093.01	1 kit

Xpress Micro Dialyzer GridKit 48 MD100, MWCO 3.5 kDa
6 cartridges in deep well plate incl. grid

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- More space for pipetting of the dialysis buffer
- Comfortable buffer exchange, e.g. rebuffering of your samples
- Secure grip of the Micro Dialyzer

Content: 6 detachable 8-microdialysis device strips, one 48-well deep well plate (5.0 ml volume), one grid, one lid

Cat.No.	Size
46105.01	1 kit

Xpress Micro Dialyzer GridKit 48 MD100, MWCO 6 - 8 kDa 6 cartridges in deep well plate incl. grid

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- More space for pipetting of the dialysis buffer
- Comfortable buffer exchange, e.g. rebuffering of your samples
- Secure grip of the Micro Dialyzer

Content: 6 detachable 8-microdialysis device strips, one 48-well deep well plate (5.0 ml volume), one grid, one lid

Cat.No.	Size
46111.01	1 kit

Xpress Micro Dialyzer GridKit 48 MD100, MWCO 12 - 14 kDa 6 cartridges in deep well plate incl. grid

HS 39173300

The Xpress Micro Dialyzer MD100 is a ready-to-use dialysis system for sample volumes from 10 µl to 100 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 25 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- More space for pipetting of the dialysis buffer
- Comfortable buffer exchange, e.g. rebuffering of your samples
- Secure grip of the Micro Dialyzer

Content: 6 detachable 8-microdialysis device strips, one 48-well deep well plate (5.0 ml volume), one grid, one lid

Cat.No.	Size
46117.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 2 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 10 µl - 100 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46150.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 2 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD100, MWCO 2 kDa, cat no. 46150.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46151.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 3.5 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 10 µl - 100 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46152.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 3.5 kDa Refill Kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD100, MWCO 3.5 kDa, cat no. 46152.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46153.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 6 - 8 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 10 µl - 100 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46154.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 6 - 8 kDa Refill Kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD100, MWCO 6 - 8 kDa, cat no. 46154

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46155.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 12 - 14 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 10 µl - 100 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46156.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 12 - 14 kDa Refill Kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD100, MWCO 12 - 14 kDa, cat no. 46156.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46157.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 20 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 10 µl - 100 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46159.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 20 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD100, MWCO 20 kDa, cat no. 46159.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46160.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 140 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 10 µl - 100 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46198.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD100, MWCO 140 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD100, MWCO 140 kDa, cat no. 46198.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46200.01	1 kit

Xpress Micro Dialyzer MD300, MWCO 2 kDa 1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46094.01	8 pieces

Xpress Micro Dialyzer MD300, MWCO 2 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46095.01	1 kit

Xpress Micro Dialyzer MD300, MWCO 3.5 kDa

single fingers in microtube

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 single microdialysis devices in 2 ml microcentrifuge tube

Cat.No.	Size
46118.01	12 pieces

Xpress Micro Dialyzer MD300, MWCO 3.5 kDa

1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46119.01	8 pieces

Xpress Micro Dialyzer MD300, MWCO 3.5 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46120.01	1 kit

Xpress Micro Dialyzer MD300, MWCO 6 - 8 kDa

single fingers in microtube

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 single microdialysis devices in 2 ml microcentrifuge tube

Cat.No.	Size
46122.01	12 pieces

Xpress Micro Dialyzer MD300, MWCO 6 - 8 kDa 1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46123.01	8 pieces

Xpress Micro Dialyzer MD300, MWCO 6 - 8 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible - plate formate. conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46124.01	1 kit

Xpress Micro Dialyzer MD300, MWCO 12 - 14 kDa

single fingers in microtube

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 12 single microdialysis devices in 2 ml microcentrifuge tube

Cat.No.	Size
46126.01	12 pieces

Xpress Micro Dialyzer MD300, MWCO 12 - 14 kDa

1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acid and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46127.01	8 pieces

Xpress Micro Dialyzer MD300, MWCO 12 - 14 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46128.01	1 kit

Xpress Micro Dialyzer MD300, MWCO 20 kDa 1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46096.01	8 pieces

Xpress Micro Dialyzer MD300, MWCO 20 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46097.01	1 kit

Xpress Micro Dialyzer MD300, MWCO 140 kDa 1 cartridge

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Compatible with 96-well deep well plates and 8-channel multipipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46098.01	8 pieces

Xpress Micro Dialyzer MD300, MWCO 140 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Flexible – dialysis against small volumes in micro tubes or microtiter plates and against larger volumes (with floating device) possible
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46099.01	1 kit

Xpress Micro Dialyzer GridKit 48 MD300, MWCO 3.5 kDa 6 cartridges in deep well plate incl. grid

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- More space for pipetting of the dialysis buffer
- Comfortable buffer exchange, e.g. rebuffering of your samples
- Secure grip of the Micro Dialyzer

Content: 6 detachable 8-microdialysis device strips, one 48-well deep well plate (5.0 ml volume), one grid, one lid

Cat.No.	Size
46121.01	1 kit

Xpress Micro Dialyzer GridKit 48 MD300, MWCO 6 - 8 kDa 6 cartridges in deep well plate incl. grid

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- More space for pipetting of the dialysis buffer
- Comfortable buffer exchange, e.g. rebuffering of your samples
- Secure grip of the Micro Dialyzer

Content: 6 detachable 8-microdialysis device strips, one 48-well deep well plate (5.0 ml volume), one grid, one lid

Cat.No.	Size
46125.01	1 kit

Xpress Micro Dialyzer GridKit 48 MD300, MWCO 12 - 14 kDa 6 cartridges in deep well plate incl. grid

HS 39173300

The Xpress Micro Dialyzer MD300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- More space for pipetting of the dialysis buffer
- Comfortable buffer exchange, e.g. re-buffering of your samples
- Secure grip of the Micro Dialyzer

Content: 6 detachable 8-microdialysis device strips, one 48-well deep well plate (5.0 ml volume), one grid, one lid

Cat.No.	Size
46129.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 2 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46186.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 2 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD300, MWCO 2 kDa, cat. no. 46186.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46187.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 3.5 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46188.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 3.5 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD300, MWCO 3.5 kDa, cat no. 46188.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46189.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 6 - 8 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46190.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 6 - 8 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD300, MWCO 6 - 8 kDa, cat no. 46190.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46191.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 12 - 14 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46192.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 12 - 14 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD300, MWCO 12 - 14 kDa, cat no. 46192.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46193.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 20 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46194.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 20 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD300, MWCO 20 kDa, cat no. 46194.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46195.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 140 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl).
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46196.01	1 kit

Xpress Dialysis Magnetic Mixing Box MD300, MWCO 140 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box MD300, MWCO 140 kDa, cat no. 46196.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46197.01	1 kit

Xpress Equilibrium Dialyzer ED300, MWCO 2 kDa

1 cartridge

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46162.01	8 pieces

Xpress Equilibrium Dialyzer ED300, MWCO 2 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46163.01	1 kit

Xpress Equilibrium Dialyzer ED300, MWCO 3.5 kDa

1 cartridge

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46164.01	8 pieces

Xpress Equilibrium Dialyzer ED300, MWCO 3.5 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46165.01	1 kit

Xpress Equilibrium Dialyzer ED300, MWCO 6 - 8 kDa
1 cartridge

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loding and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46166.01	8 pieces

Xpress Equilibrium Dialyzer ED300, MWCO 6 - 8 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46167.01	1 kit

Xpress Equilibrium Dialyzer ED300, MWCO 12 - 14 kDa
1 cartridge

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46168.01	8 pieces

Xpress Equilibrium Dialyzer ED300, MWCO 12 - 14 kDa
12 cartridges in deep well plate

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46169.01	1 kit

Xpress Equilibrium Dialyzer ED300, MWCO 20 kDa
1 cartridge

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46170.01	8 pieces

Xpress Equilibrium Dialyzer ED300, MWCO 20 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46171.01	1 kit

Xpress Equilibrium Dialyzer ED300, MWCO 140 kDa

1 cartridge

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 1 detachable 8-microdialysis device strip

Cat.No.	Size
46172.01	8 pieces

Xpress Equilibrium Dialyzer ED300, MWCO 140 kDa

12 cartridges in deep well plate

HS 39173300

The Xpress Equilibrium Dialyzer ED300 is a ready-to-use dialysis system for sample volumes from 50 µl to 300 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device consists of a U-shaped capillary made from polypropylene with graduation marks in 75 µl increments on both sides. Optimized design for fast and easy equilibrium dialysis.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis – desalting of nucleic acids and proteins in ca. 30 min
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Ideally suited for dialysis in liquid handling systems
- Automation compatible – plate format conforms to the SBS Microplate Standard

Content: 12 detachable 8-microdialysis device strips, one 96-well deep well plate (2.2 ml volume)

Cat.No.	Size
46173.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 2 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl). Optimized design for fast and easy equilibrium dialysis.
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46174.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 2 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box ED300, MWCO 2 kDa, cat no. 46174.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46175.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 3.5 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl). Optimized design for fast and easy equilibrium dialysis.
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46176.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 3.5 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box ED300, MWCO 3.5 kDa, cat no. 46176.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46177.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 6 - 8 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl). Optimized design for fast and easy equilibrium dialysis.
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46178.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 6 - 8 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box ED300, MWCO 6 - 8 kDa, cat no. 46178.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46179.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 12 - 14 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl). Optimized design for fast and easy equilibrium dialysis.
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46180.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 12 - 14 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box ED300, MWCO 12 - 14 kDa, cat no. 46180.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46181.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 20 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl). Optimized design for fast and easy equilibrium dialysis.
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46182.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 20 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box ED300, MWCO 20 kDa, cat no. 46182.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46183.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 140 kDa

HS 39173300

All-in-one kit for accelerated high-throughput dialysis (sample volume 50 µl - 300 µl). Optimized design for fast and easy equilibrium dialysis.
The especially designed dialysis box allows a greater buffer volume and better mixing through a magnetic stirrer bar compared to dialysis in a microtiter plate. This enables high-throughput dialysis of small sample volumes with reduced handling and accelerated dialysis time.
Because the samples are in connection via the dialysis buffer, the dialysis device is especially suitable for samples with the same or similar salt content or buffer.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Dialysis box
- Magnetic stirring bar
- Sealing film

Cat.No.	Size
46184.01	1 kit

Xpress Dialysis Magnetic Mixing Box ED300, MWCO 140 kDa Refill kit

HS 39173300

Refill kit for Xpress Dialysis Magnetic Mixing Box ED300, MWCO 140 kDa, cat no. 46184.

Content:
- 12 cartridges (detachable 8-micro dialyzer strips) in handling box
- Sealing film

Cat.No.	Size
46185.01	1 kit

Xpress Mini Dialyzer MD1000, MWCO 2 kDa

single fingers in tube

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes

Cat.No.	Size
46144.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 2 kDa

48 single fingers in deep well plate

HS 39173300

The Xpress Micro Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 48 single Mini Dialyzer in one 48-well deep well plate (5.0 ml volume)

Cat.No.	Size
46145.01	1 kit

Xpress Mini Dialyzer MD1000, MWCO 3.5 kDa

single fingers in tube

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes

Cat.No.	Size
46130.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 3.5 kDa

single fingers in tube plus 6 tubes

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes, 6 additional tubes, 1 forceps

Cat.No.	Size
46131.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 3.5 kDa

48 single fingers in deep well plate

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 48 single Mini Dialyzer in one 48-well deep well plate (5.0 ml volume)

Cat.No.	Size
46132.01	1 kit

Xpress Mini Dialyzer MD1000, MWCO 6 - 8 kDa

single fingers in tube

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes

Cat.No.	Size
46133.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 6 -8 kDa

single fingers in tube plus 6 tubes

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes, 6 additional tubes, 1 forceps

Cat.No.	Size
46134.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 6 - 8 kDa

48 single fingers in deep well plate

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 48 single Mini Dialyzer in one 48-well deep well plate (5.0 ml volume)

Cat.No.	Size
46135.01	1 kit

Xpress Mini Dialyzer MD1000, MWCO 12 - 14 kDa

single fingers in tube

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes

Cat.No.	Size
46136.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 12 - 14 kDa

single fingers in tube plus 6 tubes

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes, 6 additional tubes, 1 forceps

Cat.No.	Size
46137.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 12 - 14 kDa

48 single fingers in deep well plate

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 48 single Mini Dialyzer in one 48-well deep well plate (5.0 ml volume)

Cat.No.	Size
46138.01	1 kit

Xpress Mini Dialyzer MD1000, MWCO 20 kDa

single fingers in tube

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 25 ml skirted, conical tubes

Cat.No.	Size
46146.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 20 kDa

48 single fingers in deep well plate

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 48 single Mini Dialyzer in one 48-well deep well plate (5.0 ml volume)

Cat.No.	Size
46147.01	1 kit

Xpress Mini Dialyzer MD1000, MWCO 140 kDa

single fingers in tube

HS 39173300

The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 6 single Mini Dialyzer in 28 ml skirted, conical tubes

Cat.No.	Size
46148.01	6 pieces

Xpress Mini Dialyzer MD1000, MWCO 140 kDa

48 single fingers in deep well plate

HS 39173300

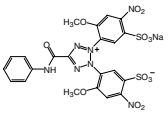
The Xpress Mini Dialyzer MD1000 is a ready-to-use dialysis system for sample volumes from 150 µl to 1000 µl. Short diffusion distance and large surface area allow very rapid dialysis. The device has two capillary channels, one for sample loading and one for filling of the dialysis buffer. The Mini Dialyzer MD1000 is easily coupled to a strip by a key/slot mechanism.

- High-quality regenerated cellulose membranes
- Efficient and fast dialysis, easy change of dialysis buffer
- Up to 98 % sample recovery
- Easy handling – sample loading and retrieval can be done with standard laboratory micropipettes
- Scalable from 1 to 48 samples
- Compatible with standard 48-well deep well plates

Content: 48 single Mini Dialyzer in one 48-well deep well plate (5.0 ml volume)

Cat.No.	Size
46149.01	1 kit

XTT



(Sodium 3,3'-{-[(Phenylamino)carbonyl]-3,4-Tetrazolium}-Bis(4-methoxy-6-nitro)benzenesulfonic acid hydrate)

$C_{22}H_{16}N_7O_{13}S_2Na$ ♦ M_r 674.53 ♦ CAS [111072-31-2]

HS 29339980

Storage temperature +2 °C to +8 °C

Monotetrazolium salt which forms a water-soluble formazan upon reduction. Suitable for anti-HIV (1 - 3) and anti-tumor (4 - 6) drug testing as well as for cell proliferation assays (7 - 8).

References:

1. Weislov, O.S. et al. (1989) J. Natl. Cancer Inst. ***81,*** 577-86
2. Gulakowski, R.J. et al. (1991) J. Virol. Methods ***33,*** 87-100
3. Yu, K.L. et al. (1992) J. Med. Chem. ***35,*** 2958-69
4. Scudiero, D.A. et al. (1988) Cancer Res. ***48,*** 4827-33
5. Jost, L.M. et al. (1992) J. Immunol. Methods ***147,*** 153-65
6. Kondo, T. et al. (1994) Oncology ***51,*** 535-9
7. Roehm, N.W. et al. (1991) J. Immunol. Methods ***142,*** 257-65
8. Buttke, T.M. et al. (1993) J. Immunol. Methods ***157,*** 233-40

Cat.No.	Size
38450.01	50 mg
38450.02	250 mg

XTT Cell Proliferation Assay

HS 38220000

Storage temperature -15 °C to -25 °C

The XTT Cell Proliferation Assay is a colorimetric assay that detects the cellular metabolic activities. During the assay, the yellow tetrazolium salt XTT is reduced to a highly coloured formazan dye by dehydrogenase enzymes in metabolically active cells. This conversion only occurs in viable cells and thus, the amount of the formazan produced is proportional to viable cells in the sample. The formazan dye formed in the assay is soluble in aqueous solution and can be quantified by measuring the absorbance at wavelength 450 nm using a spectrophotometer. An electron coupling reagent, such as N-methylphenazonium methyl sulfate (PMS) can significantly improve the efficiency of XTT reduction in cells.

- Easy to use - no need for additional reagents and washing procedures
- Rapid and sensitive – no solubilisation step, works with low cell concentrations
- Accurate – dye absorbance proportional to the number of cells/well

Content: 2x 25 ml XTT Reagent, 1 ml Activation Reagent

Cat.No.	Size
39904.01	1 kit

Xylan from beech wood pure

CAS [9014-63-5]

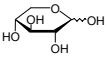
Storage Temperature: +15 °C to +30 °C

EINECS 232-760-6 ♦ WGK 1 ♦ HS 29400000

Highly purified xylan from beech wood for use in research, biochemical enzyme assays and *in vitro* diagnostic analysis.

Cat.No.	Size
38500.02	25 g

D-Xylose research grade



$C_5H_{10}O_5$ ♦ M_r 150.13 ♦ CAS [58-86-6]

EINECS 200-400-7 ♦ WGK 1 ♦ HS 29400000

Xylose, an aldopentose, has been used e.g. in biochemical tests for the identification of microbes, to stimulate microbial activity.

Assay	min. 99.0 %
MP	145 - 153 °C
[α] 20 °C/D (c=10 % in water, after 24 h)	+19.0 ° to +21.0 °
Heavy metals (Pb)	max. 5 ppm

Cat.No.	Size
38530.01	100 g
38530.02	500 g

Yeast extract SERVABACTER® powder

CAS [8013-01-2]

EINECS 232-387-9 ♦ HS 38210000

Water soluble fraction of yeast autolysate. A 2 % aqueous solution is clear and has a pH of ca. 6.5 - 7.5. Rich in B vitamins and growth factors, convenient standard material for culture media. Tested for use in tissue culture.

SERVABACTER = registered trademark of SERVA

Cat.No.	Size
24540.02	500 g
24540.03	5 kg

YPD Agar, powder 65 g for 1 liter medium

HS 38210000

A nutritious general growth medium for the propagation of yeast
20 g/l Tryptone
10 g/l Yeast extract
20 g/l Dextrose
15 g/l Agar
For making 1 L agar medium, suspend 65 g in 1 L distilled water and sterilize by autoclaving. Cool to 45 °C prior dispensing into sterile petri dishes.

References:

1. Ed. Ausubel et al. (1994) Current Protocols in Molecular Biology, Massachusetts General Hospital & Harvard Medical School

Cat.No.	Size
48508.01	650 g

YPD Medium, powder 50 g for 1 liter medium

HS 38210000

A nutritious general growth medium for the propagation of yeast.
20 g/l Tryptone
10 g/l Yeast extract
20 g/l Dextrose
For making 1 L liquid medium suspend 50 g in 1 L distilled water and sterilize by autoclaving.

References:

1. Ed. Ausubel et al. (1994) Current Protocols in Molecular Biology, Massachusetts General Hospital & Harvard Medical School

Cat.No.	Size
48507.01	500 g

2xYT Agar, powder 46 g for 1 liter medium

HS 38210000

For cultivation of *E. coli* and M13 bacteriophages in molecular biology.
16 g/l Tryptone
10 g/l Yeast extract
5 g/l NaCl
15 g Agar
For making 1 L 2x liquid medium suspend 46 g in 900 ml distilled water, adjust the pH to 7.0 with approximately 0.2 ml of 5 N NaOH, fill up to a final volume of 1 L with deionized water and sterilize by autoclaving.
Cool to 45 °C prior to dispensing into sterile petri dishes.

References:

1. Sambrook, J., et al., Molecular Cloning : A Laboratory Manual, 2nd ed., p. A.3, Cold Spring Harbor laboratory Press, Cold Spring Harbor, New York

Cat.No.	Size
48504.01	460 g

2xYT Medium, powder 31 g for 1 liter medium

HS 38210000

For cultivation of *E. coli* and M13 bacteriophages in molecular biology.
16 g/l Tryptone
10 g/l Yeast extract
5 g/l NaCl
For making 1 L 2x liquid medium suspend 31 g in 900 ml distilled water, adjust the pH to 7.0 with approximately 0.2 ml of 5 N NaOH, fill up to a final volume of 1 L with deionized water and sterilize by autoclaving.

References:

1. Sambrook, J., et al., Molecular Cloning : A Laboratory Manual, 2nd ed., p. A.3, Cold Spring Harbor laboratory Press, Cold Spring Harbor, New York

Cat.No.	Size
48503.01	620 g

Zymolyase® from *Arthrobacter luteus*, min. 20 U/mg

lyophil.

(Lyticase, β-1,3-Glucanlaminaripentaohydrolase)

DANGER
H334
CAS [37340-57-1] ♦ HS 35079090

Zymolyase®, produced by a submerged culture of *Arthrobacter luteus* (1), has strong lytic activity against living yeast cell walls to produce protoplast or spheroplast of various strains of yeast cells (2, 3).
This enzyme is prepared by ammonium sulfate precipitation. The essential enzyme activity for the lysis of yeast cells is β-1,3-glucan laminaripentaohydrolase. It hydrolyzes linear glucose polymers with β-1,3-linkages and releases specifically laminaripentaose as the main and minimum product unit (4, 5). Lytic activity varies depending on yeast strain, growth stage of yeast, or cultural conditions (6, 7, 8).
Contained main side activities are β-1,3-glucanase, protease, and mannanase (3).
At 30 °C about 70 % of the lytic activity is lost after 3 months and at 60 °C after 5 minutes all the lytic activity is lost. For lysis of viable cells the optimum temperature is 35 °C at pH 7.5 and for hydrolysis of yeast glucan 45 °C at pH 6.5.
Zymolyase® was shown to lyse *Ashbya, Candida, Debaryomyces, Eremothecium, Endomyces, Hansenula, Hanseniaspora, Kloeckera, Kluyveromyces, Lipomyces, Metschikowia, Pichia, Pullularia, Torulopsis, Saccharomyces, Saccharomycopsis, Saccharomycodes, Schwanniomyces*, etc. (5). It is activated by a SH compound such as cysteine, 2-mercaptoethanol or dithiothreitol.

Unit definition: One unit of lytic activity is defined as the enzyme amount causing a decrease of 30 % in absorbance at 800 nm using 6 mg Brewer's yeast as substrate in phosphate buffer (pH 7.5) at 25 °C.

Zymolyase = registered trademark of Kirin Holdings Company Limited

References:

1. Kaneko, T. et al. (1969) J. Gen. Appl. Microbiol. ***15***, 317 ff.
2. Kitamura, K. et al. (1971) Arch. Biochem. Biophys. ***145***, 402 ff.
3. Kitamura, K. et al. (1972) J. Gen. Appl. Microbiol. ***18***, 57 ff.
4. Kitamura, K. & Yamamoto, Y. (1972) Arch. Biochem. Biophys. ***153***, 403 ff.
5. Kaneko, T. et al. (1973) Agric. Biol. Chem. (1973) ***37***, 2295 ff.
6. Kitamura, K. et al. (1974) J. Gen. Appl. Microbiol. ***20***, 323 ff.
7. Kitamura, K. & Yamamoto, Y. (1981) Agric. Biol. Chem. ***45***, 1761 ff.
8. Kitamura, K. & Tanabe, K. (1982) Agric. Biol. Chem. ***46***, 553 ff.

Cat.No.	Size
33759.01	100 mg
33759.02	500 mg
33759.03	1 kg

Zymolyase® from *Arthrobacter luteus*, min. 100 U/mg

lyophil.

(Lyticase, β-1,3-Glucanlaminaripentaohydrolase)

DANGER
H334
CAS [37340-57-1] ♦ HS 35079090

Zymolyase®, produced by a submerged culture of *Arthrobacter luteus* (1), has strong lytic activity against living yeast cell walls to produce protoplast or spheroplast of various strains of yeast cells (2, 3).
This enzyme is prepared by ammonium sulfate precipitation and further purified by affinity chromatography. The essential enzyme activity for the lysis of yeast cells is β-1,3-glucan laminaripentaohydrolase. It hydrolyzes linear glucose polymers with β-1,3-linkages and releases specifically laminaripentaose as the main and minimum product unit (4, 5). Lytic activity varies depending on yeast strain, growth stage of yeast, or cultural conditions (6, 7, 8).
Contained main side activities are β-1,3-glucanase, protease, and mannanase (3).
At 30 °C about 90 % of the lytic activity is lost after 3 months and at 60 °C after 5 minutes all the lytic activity is lost.
For lysis of viable cells the optimum temperature is 35 °C at pH 7.5 and for hydrolysis of yeast glucan 45 °C at pH 6.5.
Zymolyase® was shown to lyse *Ashbya, Candida, Debaryomyces, Eremothecium, Endomyces, Hansenula, Hanseniaspora, Kloeckera, Kluyveromyces, Lipomyces, Metschikowia, Pichia, Pullularia, Torulopsis, Saccharomyces, Saccharomycopsis, Saccharomycodes, Schwanniomyces*, etc. (5). It is activated by a SH compound such as cysteine, 2-mercaptoethanol or dithiothreitol.

Unit definition: One unit of lytic activity is defined as the enzyme amount causing a decrease of 30 % in absorbance at 800 nm using 6 mg Brewer's yeast as substrate in phosphate buffer (pH 7.5) at 25 °C.

Zymolyase = registered trademark of Kirin Holdings Company Limited

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References:

1. Kaneko, T. et al. (1969) J. Gen. Appl. Microbiol. ***15***, 317 ff.
2. Kitamura, K. et al. (1971) Arch. Biochem. Biophys. ***145***, 402 ff.
3. Kitamura, K. et al. (1972) J. Gen. Appl. Microbiol. ***18***, 57 ff.
4. Kitamura, K. & Yamamoto, Y. (1972) Arch. Biochem. Biophys. ***153***, 403 ff.
5. Kaneko, T. et al. (1973) Agric. Biol. Chem. (1973) ***37***, 2295 ff.
6. Kitamura, K. et al. (1974) J. Gen. Appl. Microbiol. ***20***, 323 ff.
7. Kitamura, K. & Yamamoto, Y. (1981) Agric. Biol. Chem. ***45***, 1761 ff.
8. Kitamura, K. & Tanabe, K. (1982) Agric. Biol. Chem. ***46***, 553 ff.

Cat.No.	Size
33760.01	100 mg
33760.02	500 mg

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