



A Single Platform for all Bio-Imaging Needs

The LabImage Platform provides a comprehensive approach for all bio-imaging needs, including several applications with excellent analysis quality, data storage handling and licensing control, managed through a single user interface. Building new Bio-Imaging Applications based on the LabImage Platform requires less development work compared to any other available solution.

Intuitive User Interface/Workflow

The software's intuitive user interface fits every user's experience level. Beginners are supported by the unique LabImage Workflow Concept and power users can adapt every aspect of the analysis workflow just as it suits their needs. All LabImage Applications guide the user through the workflow and guarantee highly efficient step-by-step analysis.

Independent from OS - Runs on Windows, Mac OS X, Linux

Built upon Java and Eclipse RCP-technology, the LabImage Platform and all of its modules will run on any common operating system. Additionally, the user interface always resembles the operating system's look and feel without any need for emulation and with no performance loss. Boasting a higher capability than many other applications, the LabImage Platform guarantees full interoperability even in complex environments and mixed operating systems.

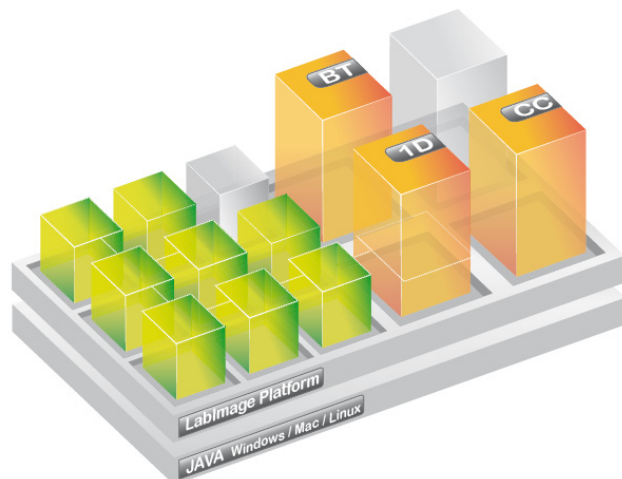
Powerful Image Analysis

Using the excellent scientific image analysis libraries of ImageJ (NIH) and others, the LabImage Platform incorporates a considerable array of well-established standard image analysis algorithms as well as intelligent and trainable object detection methods. This set of tools will even solve the most complex image analysis problems.

The platform's open architecture allows for easy incorporation of new methods as soon as they become available, making prototyping as fast as possible.

FDA 21 CFR Part 11 GxP Compliance

A documented approval process, secure data storage and the prevention of data manipulation are essential for working in GxP-settings - this innovative LabImage Module delivers it all within a single system. All LabImage Platform applications can be combined with the highly advanced GxP-module. The user account system is based on the user's roles and rights within a GxP-setting and can easily be adapted to individual needs. Specific auditing protocols (Audit Trails) make sure that all LabImage applications are ready for use in FDA 21 CFR Part 11





Ready to use Applications for 1D Gel Analysis and Colony Counting

LabImage 1D is the market leading application in 1D-gel analysis. It provides a full set of proven analysis tools for 1D-gel electrophoresis analysis and precise lane and band detection, as well as quantification and size calculation with a high level of automation. The unique LabImage Workflow Concept reduces the analysis time to a minimum. Meaningful reports document the results.

Detecting spots and microplate colonies becomes extremely easy with LabImage CC. Based on the powerful LabImage Platform, the software is very easy to use and will automatically detect objects fast, accurate and reproducible. Analysis data can be exported and documented in significant reports.

These and further applications can be extended to special requirements or licensed as a part of a comprehensive software suite.

Flexible License Control

For the protection against unauthorized usage and to define individual feature packages, the LabImage Platform comes with a highly adaptable license management system. The customer can choose between stand-alone, network, time- or feature-limited, pay-per-use, as well as trial or demo versions. The license media can either be USB-dongles or file-based. Each license can be individually extended or upgraded any time.

Reporting

The LabImage Platform is equipped with a customizable reporting tool. Users can have their analysis data summarized and displayed in an easy-to-read format with just a few clicks. Reports can be personalized and saved to standard formats such as MS Word, MS Excel, PDF or plain text.

Control Laboratory Equipment

Most analysis processes depend on digital image data that are captured by laboratory devices. The LabImage Platform offers an integrated module to control laboratory equipment like scanners, microscopes, and motorized stages. These devices can also be included in a centrally controlled and automated workflow, even with full GxP-compliance.

Automation

The automation of processes is an important part in the analysis of image data in the life sciences and therefore plays an essential role in the LabImage Platform. Almost every analysis step can be automated and implemented in a macro. A macro can be applied to either single images or image stacks, forming the basis for high-throughput-screening.

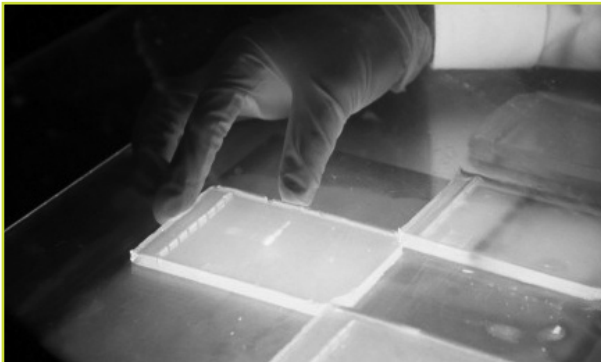
More Features

- Extendable by other imaging applications
- Online and offline updates including version management and rollback
- Central data management
- Import/Export for LIM-Systems
- Integrated Help System
- Fully OEM-Compliant
- Multi language support



LabImage 1D Feature Chart

LabImage 1D is the leading solution in 1D gel analysis. Available in 3 versions, it provides the suitable toolset for every demand. Our product family ranges from the entry version LabImage 1D L320 for basic requirements over the extended L340 version up to the complete and fully featured LabImage 1D L360. Every version offers full 16 bit image processing, flexible licensing and reliable analysis.



<i>Operating System</i>	<i>L320</i>	<i>L340</i>	<i>L360</i>
Windows Version (98 SE, ME, 2000, XP, Vista)	x	x	x
Fully Windows 7 compliant	x	x	x
Mac OS X Version	x	x	x
Linux Version	x	x	x

<i>Languages</i>			
English	x	x	x
German	x	x	x

<i>Help</i>			
Integrated short Tutorial	x	x	x
User Manual as PDF Document	x	x	x
Download Manual from Website	x	x	x
Printed User Manual (extra cost)	x	x	x
Web based Video Tutorial	x	x	x
ToolTips	x	x	x

<i>Update and Support</i>			
Online Update	x	x	x
Update with CD/DVD/file	x	x	x
Support by Phone	x	x	x
Web based Support System	x	x	x



<i>Image Import</i>	<i>L320</i>	<i>L340</i>	<i>L360</i>
Import common Image Types (TIFF, JPG, PNG, BMP)	x	x	x
Import IMG and INF Formats (e,g, FUJI)	x	x	x
Full 16 bit Image Processing	x	x	x
Import Image from Scanner or Camera	x	x	x

<i>Image Preprocessing</i>			
Image editing Tools: crop, rotate, mirror, scale	x	x	x
Image Filters: sharpen, median, blur, colorize	x	x	x
Image Filter: Brightness, Contrast	x	x	x

<i>Image Analysis</i>			
Multiple ROIs			x
Full automatic Lane Detection	x	x	x
Full automatic Band Detection	x	x	x
Manual Lane and Band Correction	x	x	x
Bend and move single Lane or Lane Box	x	x	x
Grimace Correction		x	x
Lane Profile with multiple Lane View	x	x	x
3D Lane Profile	x	x	x
Apply Name Template		x	x

<i>Calculation</i>			
Values: MW, Rf, Area, Band Vol., cal. Band Vol.	x	x	x
Full Set of 27 Band and Lane Values		x	x

<i>Automation</i>			
Create Macros for Automation			x
Edit Macros in Editor			x
Apply Macro to single Image			x
Apply Macro to Image Stack			x



<i>Background Reduction</i>	<i>L320</i>	<i>L340</i>	<i>L360</i>
None	x	x	x
Rolling Ball	x	x	x
Valley to Valley	x	x	x
Image Rectangle	x	x	x
Base Line (adjustable)	x	x	x
Rubber Band	x	x	x
Minimum Profile	x	x	x
Preview Lane Profile without Background	x	x	x

<i>MW Standard</i>			
Create own MW or pl Standard	x	x	x
Export Standard	x	x	x
Assign Sample Image to Standard	x	x	x
6 Calibration Curve Types	x	x	x
MW Standard Editor	x	x	x
Multiple Standards for one Gel	x	x	x
Use Rf correction for multiple Standards		x	x
Download Standards from Website	x	x	x

<i>RF Calibration</i>			
Rf Calibration		x	x

<i>Quantification</i>			
Assign absolute Values for Band	x	x	x
Added Amount per Lane		x	x
6 Calibration Curve Types	x	x	x

<i>Normalization</i>			
Normalize single Band	x	x	x
Normalize Group of Bands		x	x



<i>Export and Report</i>	<i>L320</i>	<i>L340</i>	<i>L360</i>
Predefined Report Templates	x	x	x
Export Report to PDF	x	x	x
Export Report to other Formats (RFT, XLS)		x	x
Print Report	x	x	x
Personalize Reports	x	x	x
Export Data Table	x	x	x
Export Analysis Data to File (xls, csv)	x	x	x
Export Analysis Data to Clipboard	x	x	x
Export Analysis Data to Application	x	x	x
Add Notes/Comments	x	x	x

<i>FDA 21 CFR Part 11 Compliance (Additional Module required)</i>			
FDA 21 CFR Part 11 Compliance		x	x
Secure Data Storage in Database		x	x
User Management		x	x
Recording of Audit Trails		x	x
Create Reports for Audit Trails		x	x

<i>Additional Features</i>			
Based on LabImage Platform	x	x	x
Data Storage in Database	x	x	x
USB Dongle Licenses/License File	x	x	x
Stand-alone Licenses	x	x	x
Network Licenses/ Network License Server	x	x	x
Update Network Licenses	x	x	x
Customizable User Interface and Preferences	x	x	x
Undo/Redo Concept	x	x	x
View and edit multiple Projects	x	x	x



LabImage 1D - High Throughput Analysis Automation with Macros

LabImage 1D is the most advanced solution in the automation of 1D gel analysis. It offers the full analysis tool set with automatic lane and band detection, automation of analysis, combined with adjustable background reduction to achieve reliable results.

LabImage 1D offers a set of macro modules to fully automate your gel analysis process with a single click.

Macros can be created using the built-in macro editor. LabImage 1D provides High Throughput Analysis for image stacks and single images.

Basic Features in Macro Mode

Preprocessing

- Rotate Image
- Flip Image horizontally
- Flip Image vertically
- Invert Work Image
- Import OD Calibration
- Convert Display and Work Image to 8 bit
- Crop and scale Image

Lanes and Bands

- Create Region of Interest
- Automatic Lane Detection
- Calculate Background
- Automatic Band Detection
- Calculate Background
- Create Lane Grid

Calculations

- Add MW Standard
- Calculate MW Curve Fitting
- Add Band Quantity
- Add Lane Quantity
- Change Quantification Computation
- Add Band to Normalisation
- Change Normalisation Computation

Reporting

- Export all Data to File
- Save as CSV, XLS
- Create and save Report
- Save as PDF, RTF, HTML

Others

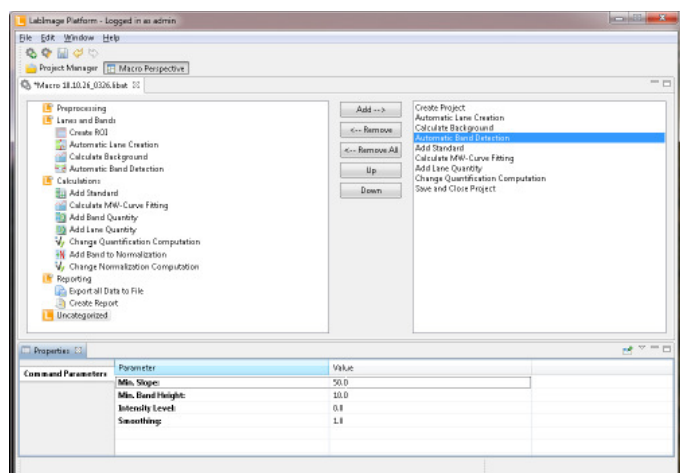
- Save and close Project
- Add Breakpoint to pause macro processing

Additional Features in Macro Plus

- Create single Lane and Band
- Automatic Creation of specific Bands
- Load Name Templates

Customized Add-ons

- Automatic RF Correction based on Reference Lane or Bands
- Automatic Quantification for single Lane
- Create Macro out of existing Project



Screen of Macro Editor



LabImage GxP Compliance Fully FDA 21 CFR Part 11 compliant solution.

The LabImage Platform provides a fully FDA 21 CFR Part 11 compliant environment. All available applications can be extended to comply with the FDA regulations for electronic record.

Based on latest software structures and security requirements - the LabImage GxP integration provides one of the latest integration in 21 CFR Part 11 compliance. The focus was set to intuitive usability, smooth integration and security.

Authentication / Authorization

- Access to software using secure login and password only
- Secure user data storage (login, user rights, passwords, secured database)
- Create user groups with user specific rights as create, edit and delete data
- Documentation of changes for user accounts, create reports for user changes
- Usage of secure passwords (number of characters used and special characters)
- Passwords can be used for a limited period of time, password history is stored
- User accounts can be activated/disabled, unused accounts can be disabled by specified time
- Number of failed logins will be saved
- Forgotten passwords can be set back by administrator

Data Storage

- Data storage in a secure GxP capable database (project data, history)
- Every data can be exported to third parties
- Project data can be used in higher versions
- Reports can be created and printed with space for signature
- Stand-Alone and network storage of data

Documentation of Workflows

- Every single step of the users action is documented so third parties can verify those steps (Audit Trail)
- Every Step is documented using: date, time, action and comment if needed
- Actions can be
 - o Every action to lead to the result
 - o Single action if image data is modified
 - o System updates, changes in user accounts
 - o Manual changes
- Secure data storage to avoid data manipulation (local or network database)
- Create work history, export in IT formats (csv, txt, pdf), Define comments



Action	User	Status	Datum
LabImage ID			
DNA Gel 4	admin	approved	15.11.2010 17:56:14 CET
admin			
CREATE->ROI 1			15.11.2010 17:56:41 CET
Automatische Spurendetektion ->ROI 1			15.11.2010 17:56:42 CET
DELETE->(ROI 1)-> Spur 7			15.11.2010 17:56:46 CET
SetAutoNames->ROI 1			15.11.2010 17:56:46 CET
CREATE->(ROI 1)->Spur 20			15.11.2010 17:56:51 CET
SetAutoNames->ROI 1			15.11.2010 17:56:51 CET
Hintergrundmethode ändern->ROI 1			15.11.2010 17:56:57 CET
Automatische Bandendetektion->ROI 1->			15.11.2010 17:56:59 CET
Automatische Bandendetektion->ROI 1->			15.11.2010 17:56:59 CET
Automatische Bandendetektion->ROI 1->			15.11.2010 17:56:59 CET
Automatische Bandendetektion->ROI 1->			15.11.2010 17:56:59 CET
Automatische Bandendetektion->ROI 1->			15.11.2010 17:56:59 CET
Automatische Bandendetektion->ROI 1->			15.11.2010 17:56:59 CET

User Accounting / Data Storage

The LabImage User Account and Data Management (UADM) is used to create, manage and control users within any GxP environment. Different roles like supervisor, user and viewer can be used to define user rights. User actions are documented and reported in the Audit Trail. Data is stored in a secure local or network database.

GLP Log Report

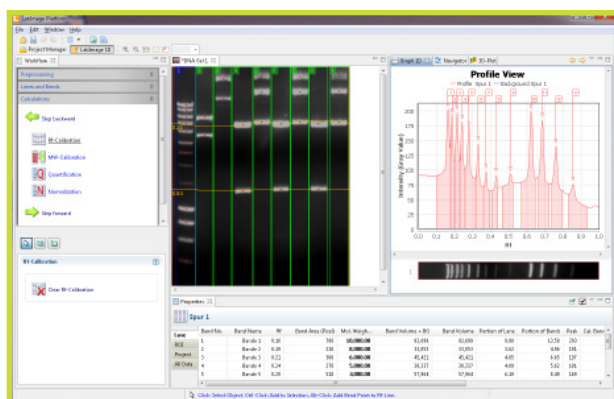
Projectname: DNA Gel 4
 Created by: admin
 Created: 15.11.2010 17:56:14 CET
 Status: Approved
 Properties: Size: 0,195 MB; Width: 562px; Height: 363px; Depth: 8Bit; AutoInvert: false;

Action: CREATE->ROI 1
 Parameter: (0,0)(0,362)(561,362)(561,0);
 Performed by: admin
 Executed on: 15.11.2010 17:56:41 CET

Action: Automatische Spurendetektion ->ROI 1
 Parameter: LaneMode: Gerade; AutoDetectLaneWidth: true; EqualLaneWidth: false; WidthHint: -1.0;
 Performed by: admin
 Executed on: 15.11.2010 17:56:42 CET

Creating Audit Trails

Every user action is documented within the 21 CFR Part 11 environment using user ID, date, name of action and parameters. The authorisation to approve projects depend on granted user rights. All analysis steps are summarized in a meaningful audit trail.



Available for Applications within the LabImage Platform

Each application in the LabImage Platform can use the GxP Modules. User can add or extend the GxP module if needed in a later stage. All applications store analysis data within the same database.