

PRODUCT INFORMATION

Alu-Gel-S suspension

Art.-Nr. 12261

Product Description:

General Alu-Gel-S is an aluminum hydroxide gel with a high degree of purity. The special techniques used in its manufacture ensure a stable gel which has an uniformly high adsorption capacity.

Features

- Aluminum hydroxide, ca. 1.3 % (measured as Al₂O₃)
- Pyrogen free (as assayed in the supernatant), sterile, salt free
- Protein adsorption: approx. 12 mg/ml (for human serum albumin)

Storage Alu-Gel-S should always be stored in containers of aluminium, pyrex glass or inert plastic as the adsorption capacity of Alu-Gel-S may be effected by impurities present in the material of other types of containers. Freezing may completely destroy the colloidal nature of the gel, and hence must be avoided.

Application Adjuvant for vaccine preparation

Adsorption is crucial for the adjuvant effect, so antigen adsorption must be carefully monitored and optimized. In complex antigen preparations, certain components may adsorb faster than others. Alu-Gel-S is supplied with extremely low ionic strength and a pH of 6-7. Adsorption should be tested at pH intervals of 0.5, starting from pH 6-7, to determine the optimal pH for the antigen preparation. The pH is adjusted by adding an appropriate buffer such as glycine. Some antigens, like the foot-and-mouth disease virus, lose their antigenicity at a pH of 6.5. Adsorption is achieved by incubating the gel and antigen (at the selected pH) with slow stirring for several hours or overnight. Multivalent anions, especially phosphates, can interfere with adsorption capacity and elute the adsorbed antigen. In veterinary vaccines, the proportion of aluminum hydroxide gel suspension typically ranges from 15% to 40% v/v. The optimal adjuvant dose is usually determined empirically in a pilot study.

It can be repeatedly autoclaved without losing any of its adsorption capacity. Alu-Gel-S is a poor heat conductor, therefore sterilization should take place in a stirred vessel at 121°C for one hour.

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