

Vaccine Adjuvants

Aluminum Hydroxide Gels (Alum) for Animal Health

User Guide

SPI Pharma has extensive experience and knowledge of aluminum hydroxide chemistry, with more than 70 years for antacid forms and more than 20 years for VAC gels as a vaccine adjuvant. This expertise provides consistency throughout our products in terms of compliance, morphology, particle size distribution, and protein adsorption capacity.

Description

White to almost white translucent viscous colloidal gel (pumpable), used as a vaccine adjuvant


Retest Date: 3 years from the date of manufacture

Storage: Protect from excessive temperature and from freezing

Characteristics	Grades	Ph. Eur. Specification	VAC 20 HA	VAC 20	VAC 30	VAC 15
Assay Al ₂ O ₃ % Aluminum stated on the label		90 - 110% Aluminum stated on the label	1.9-2.1%	1.9 - 2.1%	2.9 - 3.1%	1.4 - 1.6%
Corresponding to Al(OH) ₃ %			2.91-3.21%	2.91 - 3.21%	4.44 - 4.74%	2.14 - 2.45%
Corresponding to Al %			1.00-1.11%	1.00 - 1.11%	1.54 - 1.64%	0.74 - 0.85%
Adsorption Power (Ph. Eur. Test)		Conforms No detectable BSA in solution	Conforms No detectable BSA in solution	Conforms No detectable BSA in solution	Conforms No detectable BSA in solution	Conforms No detectable BSA in solution
Point of Zero Charge, For Info Only			10.2	10.2	10.2	10.2
Sedimentation (Ph. Eur. Test) @ 5mg Al/mL		NMT 5 mL	NMT 5 mL	NMT 5 mL	NMT 5 mL	NMT 5 mL
Viscosity, For Info Only			1000-2000cps (Brookfield V3/30)	NMT 1000 cps (Brookfield V3/30)	NMT 1500 cps (Brookfield V3/30)	NMT 500 cps (Brookfield V3/30)
Nitrate (NO ₃) (Ph. Eur. Test)		NMT 100 ppm	NMT 100 ppm	NMT 100 ppm	NMT 100 ppm	NMT 100 ppm
Ammonium (NH ₄) (Ph. Eur. Test)		NMT 50 ppm	NMT 50 ppm	NMT 50 ppm	NMT 50 ppm	NMT 50 ppm
Sulfate (Total SO ₄) (Ph. Eur. Test)		NMT 0.5%	NMT 0.5%	NMT 0.5%	NMT 0.5%	NMT 0.5%
Chloride (Cl) (Ph. Eur. Test)		NMT 0.33%	NMT 0.33%	NMT 0.33%	NMT 0.33%	NMT 0.33%
Arsenic (As) (Ph. Eur. Test)		NMT 1 ppm	NMT 1 ppm	NMT 1 ppm	NMT 1 ppm	NMT 1 ppm
Iron (Fe) (Ph. Eur. Test)		NMT 15 ppm	NMT 15 ppm	NMT 15 ppm	NMT 15 ppm	NMT 15 ppm
pH (Ph. Eur. Test)		5.5 - 8.5	6.0-7.0	5.5 - 8.5	5.5 - 8.5	5.5 - 8.5
Endotoxins (Ph. Eur. Test)		LT 5 IU	LT 5 IU	LT 5 IU	LT 5 IU	LT 5 IU
Standard Packaging			25kg Jerrycan	25kg Jerrycan	50kg plastic drum	50kg plastic drum
Sterilization			All products can be sterilized by Gamma Irradiation			


*approximately


SPI Pharma's vaccine adjuvants are used to help eliminate highly contagious and multiple species diseases such as Foot and Mouth, Classical Swine Fever, Anthrax, Aujeszky's, and several more. Our adjuvants enable vaccines to eradicate disease, secure food supply, reduce the threat of disease transmission, and/or improve the health of livestock and pets. We offer customized technical service and support- with skilled pharmacists and chemists offering assistance in troubleshooting and analysis.





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Aluminum Hydroxide Gel Grades for Animal Health








 **Proven Technology**

 **Reliable Supply**


**Less Antigen
With Right Adjuvant**


 **Adsorb Negatively Charged Antigens**


 **Slows Release of Inactivated Virus or Bacteria**

 **Activate and Stimulate Immune Response**


Track Record & Quality


 **Decades in Industry Supplying Major Vaccine Producers**

 **Manufactured under cGMP**


 **Ph. Eur. Monograph Compliant**


Innovation With VAC 20 HA


 **50% Added Higher Adsorption Capacity than Standard VAC**


 **Finer Particle Size & Narrower pH Range**


Reduce Redness & Swelling


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