




# MATERIAL SAFETY DATA SHEET

Doc. ID: OAX05210-75 AA  
Issued (year/month/day) 2009/11/10

## Section 1 Company and Product Identification

<b>Product Name</b>	AdvaHum AM 101
<b>Part Number</b>	OAX05210
<b>Product Use</b>	For Research Use Only. See product literature for details.
<b>Manufacturer</b>	Beckman Coulter Biomedical GmbH Sauerbruchstraße 50 81377 Munich, Germany Tel: +49-89-579589-3540 Fax: +49-89-579589-3503 Email: support@advalytix.com
<b>Distributor and Emergency Phone No.</b>	 Refer to attached list, Document ID: <a href="#">472050</a> , for local distributor and emergency phone numbers.

## Section 2 Hazards Identification

<b>Emergency Overview</b>	<b>Colorless; Clear; Liquid; Odorless</b> <b>Nonflammable aqueous solution.</b> <b>Skin, eye and respiratory tract irritant.</b>		
<b>Physical Hazards</b>	No physical hazards were determined from a review of available literature.		
<b>Potential Health Effects Summary</b>	May cause skin, eye and respiratory tract irritation. Reproductive effects have been reported in several animal studies. See Section 11 Toxicological Information for more detailed health information.		
<b>Potential Environmental Effects</b>	No information available.		
<b>Product Hazard Classifications</b>	<b>Meets Hazardous Criteria for Preparation/Mixture</b>		
	<b>EU:</b> Not applicable	<b>WHMIS:</b> D2B	<b>US OSHA:</b> Hazardous

### Section 3 Composition and Information on Ingredients

Hazardous Ingredients:				Hazard Classification of Pure Ingredients		
Chemical Name	CAS #	EINECS #	% by wt.	EU	WHMIS	US OSHA
Glycerol	56-81-5	2002895	< 25	No	D2B	Irritant

See Section 15 Regulatory Information for additional information on hazard classifications.

### Section 4 First Aid Measures

<b>Inhalation</b>	If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.
<b>Eye Contact</b>	If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occur, obtain medical attention.
<b>Skin Contact</b>	In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If pain or irritation occur, obtain medical attention.
<b>Ingestion</b>	If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.

### Section 5 Fire Fighting Measures

<b>Flammable Properties</b>	Nonflammable aqueous solution.
<b>Extinguishing Media</b>	Use extinguishing media suitable for surrounding fire.
<b>Special Fire and Explosion Hazards</b>	No special hazards determined.
<b>Hazardous Combustion Products</b>	No combustion products posing significant hazards are expected from this product (an aqueous solution).
<b>Protective Equipment for Firefighters</b>	Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

### Section 6 Accidental Release Measures

<b>Personal Precautions</b>	Use good laboratory procedures; avoid eye and skin contact.
<b>Spill and Leak Procedures</b>	Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.
<b>Environmental Precautions</b>	Contain spill to prevent migration.

## Section 7 Handling and Storage

<b>Handling Precautions</b>	Use good laboratory procedures; avoid eye and skin contact.
<b>Recommended Storage Conditions</b>	Keep away from incompatible material (see Section 10). To maintain efficacy, store according to the instructions in the product labeling.

## Section 8 Exposure Controls and Personal Protection

<b>Exposure Limits</b>	
<b>US OSHA:</b>	
Glycerol	15 mg/m <sup>3</sup> TWA (mist, total particulate); 5 mg/m <sup>3</sup> TWA (mist, respirable fraction)
<b>ACGIH:</b>	
Glycerol	10 mg/m <sup>3</sup> TWA (mist)
<b>DFG MAK:</b>	
Glycerol	50 mg/m <sup>3</sup> MAK (inhalable fraction); 100 mg/m <sup>3</sup> Peak (inhalable fraction)
<b>NIOSH</b>	None established
<b>Japan</b>	None established
<b>Engineering Controls</b>	Use in well ventilated area.
<b>Respiratory Protection</b>	Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional.
<b>Eye Protection</b>	Safety glasses or chemical goggles should be worn to prevent eye contact.
<b>Skin Protection</b>	Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact.

## Section 9 Physical and Chemical Properties

<b>Physical State</b>	Liquid
<b>Color</b>	Colorless
<b>Transparency</b>	Clear
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	Not applicable
<b>pH</b>	Not available
<b>Freezing Point</b>	Not available
<b>Boiling Point</b>	Not available
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not available

## Section 9 Physical and Chemical Properties (Continued)

<b>Flammability (Solid, Gas)</b>	Not applicable
<b>Flammable Limits</b>	Not applicable
<b>Vapor Pressure</b>	Not available
<b>Vapor Density</b>	Not available
<b>Specific Gravity</b>	≈ 1.05 @20°C
<b>Solubility</b>	
<b>Water</b>	Miscible
<b>Organic</b>	Not available
<b>Coefficient of Water/Oil Distribution</b>	Not available
<b>Autoignition Temp.</b>	Not applicable
<b>Decomposition Temperature</b>	Not available
<b>Percent Volatiles</b>	Not applicable

## Section 10 Stability and Reactivity

<b>Stability</b>	Stable in closed containers under normal temperatures and pressures.
<b>Hazardous Incompatibilities</b>	Strong acids Strong bases Strong oxidizers
<b>Hazardous Decomposition Products</b>	No decomposition products posing significant hazards would be expected from this product (a dilute aqueous solution).
<b>Conditions to Avoid</b>	Avoid contact with incompatible materials.

## Section 11 Toxicological Information

<b>Toxicity Data for Hazardous Ingredients</b>	
Glycerol	Inhalation LC50 Rat: >570 mg/m <sup>3</sup> /1H; Oral LD50 Rat:12600 mg/kg; Dermal LD50 Rat:>21900 mg/kg
<b>Primary Routes of Exposure</b>	The most likely routes of exposure are skin and eye contact. Inhalation may occur if mists are formed in product use.
<b>Potential Effects of Acute Exposure</b>	Exposure to glycerol by inhalation of mists may cause respiratory tract irritation; skin or eye contact may cause irritation. Mildly toxic by ingestion. Symptoms may include headache, nausea and vomiting. Very high doses may cause kidney damage.

## Section 11 Toxicological Information (Continued)

<b>Potential Effects of Chronic Exposure</b>	Repeated or prolonged exposure to glycerol by skin contact may cause dermatitis with irritation and swelling.
<b>Symptoms of Overexposure</b>	Symptoms may include: coughing, headache, fatigue, nausea, vomiting, dizziness, blurred vision, red and watery eyes, abdominal pain and unconsciousness.
<b>Carcinogenicity</b>	No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 67/548/EEC Annex I.
<b>Other Effects</b>	Reproductive effects have been reported in animal studies. Possible mutagen.
<b>Conditions Aggravated by Exposure</b>	None identified.

## Section 12 Ecological Information

<b>Ecotoxicity</b>	
Glycerol	96 Hr LC50 Oncorhynchus mykiss: 51-57 ml/L [static]
<b>Biodegradability</b>	No information available.
<b>Bioaccumulation</b>	No information available
<b>Mobility</b>	No information available.
<b>Other Adverse Effects</b>	No information available

## Section 13 Disposal Considerations

<b>Waste Disposal</b>	Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.
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## Section 14 Transport Information

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

## Section 15 Regulatory Information

### US Federal and State Regulations

<b>SARA 313</b>	No ingredients listed.
<b>CERCLA RG's, 40 CFR 302.4</b>	No ingredients listed.
<b>California Proposition 65</b>	No ingredients listed.
<b>Massachusetts MSL</b>	Glycerol is listed.
<b>New Jersey Dept. of Health RTK List</b>	Glycerol is listed.

## Section 15 Regulatory Information (Continued)

<b>Pennsylvania RTK</b>	Glycerol is listed.
<b>EU Labeling Classification</b>	Preparation not classified.
<b>Canada</b>	
<b>WHMIS Classification:</b>	D2B - Poisonous and Infectious Material: Division 2 - Other Toxic Effects: Toxic (Non-reproductive cells mutagenicity)
<b>PIN:</b>	Not applicable
<b>Ingredients on Ingredient Disclosure List:</b>	None
<b>Ingredients with unknown toxicological properties:</b>	None
Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.	

## Section 16 Other Information

<b>Beckman Coulter Safety Rating</b>	<b>Flammability (Section V): 0</b> <b>Health (Section XI): 2</b> <b>Reactivity with Water (Section X): 0</b> <b>Contact (Section VIII): 2</b>	Code 0=none 1=slight 2=caution 3=severe
<b>Revision Changes</b>	Not applicable	
<b>Risk Phrases and WHMIS Classification Description From Section 3</b>	D2B - Poisonous and Infectious Material: Division 2 - Other Toxic Effects: Toxic (Non-reproductive cells mutagenicity)	
For further information, please contact your local Beckman Coulter representative.		

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