

Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: Universal qPCR Master Mix

Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd.

Address: Bernardo O'Higgins 1213. Concepción, Chile.

Phone: (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification

Signal Word: None

Health hazards: Not classified

Physical hazards: Not classified

Hazard Statements: Not Applicable

Precautionary: Not Applicable

Statements:

Principle Routes of Exposure

Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.

Skin: May cause skin irritation in susceptible persons.

Inhalation: May be harmful by inhalation.

Ingestion: May be harmful if swallowed.

Specific effects:

Carcinogenic effects: None.

Mutagenic effects: None.

Reproductive toxicity: None.

Sensitization: None.

Target Organ Effects: None under normal use conditions.

HMIS:

Health: 0

Flammability: 0

Reactivity: 0

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed: Not Applicable

Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.

Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection: Impervious gloves.

Eye protection: Wear safety glasses with side shields (or goggles).

Skin and Body Protection: Lightweight protective clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form: Liquid

Appearance: No information available

Odor: No data available

Odor Threshold: No data available

Boiling point / boiling range: °C >100 °F >212

Melting point / melting range: °C >0 °F >32

flash point: °C >90 °F >160

Autoignition Temperature: °C No data available °F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition products: Carbon oxides.
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.

Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Acute aquatic toxicity: Not classified for acute.

Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None

Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US State Regulations:

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PUPOSE"

US Federal Regulations:

SARA 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: Primer, Probes and Internal Control Mix
Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification		Principle Routes of Exposure		Specific effects:		HMIS:	
Signal Word:	None	Potential Health Effects:		Carcinogenic effects:	None.	Health:	0
Health hazards:	Not classified	eyes:	May cause eye irritation with susceptible persons.	Mutagenic effects:	None.	Flammability:	0
Physical hazards:	Not classified	Skin:	May cause skin irritation in susceptible persons.	Reproductive toxicity:	None.	Reactivity:	0
Hazard Statements:	Not Applicable	Inhalation:	May be harmful by inhalation.	Sensitization:	None.		
Precautionary:	Not Applicable	Ingestion:	May be harmful if swallowed.	Target Organ Effects:	None under normal use conditions.		
Statements:							

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
Most important symptoms and effects, both acute and delayed: Not Applicable
Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.
Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.
Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.
 See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.
Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.	Skin and Body Protection:	Lightweight protective clothing.
Hand protection:	Impervious gloves.	Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.
Eye protection:	Wear safety glasses with side shields (or goggles).		

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form:	Liquid	Boiling point / boiling range:	°C >100	°F >212
Appearance:	No information available	Melting point / melting range:	°C >0	°F >32
Odor:	No data available	flash point:	°C >90	°F >160
Odor Threshold:	No data available	Autoignition Temperature:	°C No data available	°F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition products: Carbon oxides.
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.

Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Acute aquatic toxicity: Not classified for acute.

Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None

Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US State Regulations:

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

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US Federal Regulations:

SARA 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: One qRTPCR Enzyme Mix
Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification		Principle Routes of Exposure		Specific effects:		HMIS:	
Signal Word:	None	Potential Health Effects:		Carcinogenic effects:	None.	Health:	0
Health hazards:	Not classified	eyes:	May cause eye irritation with susceptible persons.	Mutagenic effects:	None.	Flammability:	0
Physical hazards:	Not classified	Skin:	May cause skin irritation in susceptible persons.	Reproductive toxicity:	None.	Reactivity:	0
Hazard Statements:	Not Applicable	Inhalation:	May be harmful by inhalation.	Sensitization:	None.		
Precautionary:	Not Applicable	Ingestion:	May be harmful if swallowed.	Target Organ Effects:	None under normal use conditions.		
Statements:							

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
Inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
Most important symptoms and effects, both acute and delayed: Not Applicable
Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.
Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.
Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.
 See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.
Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.	Skin and Body Protection:	Lightweight protective clothing.
Hand protection:	Impervious gloves.	Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.
Eye protection:	Wear safety glasses with side shields (or goggles).		

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form:	Liquid	Boiling point / boiling range:	°C >100	°F >212
Appearance:	No information available	Melting point / melting range:	°C >0	°F >32
Odor:	No data available	flash point:	°C >90	°F >160
Odor Threshold:	No data available	Autoignition Temperature:	°C No data available	°F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition products: Carbon oxides.
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.

Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Chronic aquatic toxicity: Not classified for acute.

Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None

Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US State Regulations:

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

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US Federal Regulations:

SARA 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: HANTA Positive Control

Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd.

Address: Bernardo O'Higgins 1213. Concepción, Chile.

Phone: (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification

Signal Word: None

Health hazards: Not classified

Physical hazards: Not classified

Hazard Statements: Not Applicable

Precautionary: Not Applicable

Statements:

Principle Routes of Exposure

Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.

Skin: May cause skin irritation in susceptible persons.

Inhalation: May be harmful by inhalation.

Ingestion: May be harmful if swallowed.

Specific effects:

Carcinogenic effects: None.

Mutagenic effects: None.

Reproductive toxicity: None.

Sensitization: None.

Target Organ Effects: None under normal use conditions.

HMIS:

Health: 0

Flammability: 0

Reactivity: 0

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed: Not Applicable

Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.

Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Skin and Body Protection: Lightweight protective clothing.

Hand protection: Impervious gloves.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Eye protection: Wear safety glasses with side shields (or goggles).

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form: Liquid

Appearance: No information available

Odor: No data available

Odor Threshold: No data available

Boiling point / boiling range: °C >100 °F >212

Melting point / melting range: °C >0 °F >32

flash point: °C >90 °F >160

Autoignition Temperature: °C No data available °F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
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Partition coefficient: No data available
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Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
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Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition: Carbon oxides.
products:
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
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Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.

Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

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Chronic aquatic toxicity: Not classified chronic.
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Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None

Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US Federal Regulations:

SARA 313

This product is not regulated by SARA.

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This product does not contains HAPs.

US State Regulations:

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Reason for revision: SDS sections updated.

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Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: HANTA Negative Control

Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd.

Address: Bernardo O'Higgins 1213. Concepción, Chile.

Phone: (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification

Signal Word: None

Health hazards: Not classified

Physical hazards: Not classified

Hazard Statements: Not Applicable

Precautionary: Not Applicable

Statements:

Principle Routes of Exposure

Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.

Skin: May cause skin irritation in susceptible persons.

Inhalation: May be harmful by inhalation.

Ingestion: May be harmful if swallowed.

Specific effects:

Carcinogenic effects: None.

Mutagenic effects: None.

Reproductive toxicity: None.

Sensitization: None.

Target Organ Effects: None under normal use conditions.

HMIS:

Health: 0

Flammability: 0

Reactivity: 0

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed: Not Applicable

Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.

Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection: Impervious gloves.

Eye protection: Wear safety glasses with side shields (or goggles).

Skin and Body Protection: Lightweight protective clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form: Liquid

Appearance: No information available

Odor: No data available

Odor Threshold: No data available

Boiling point / boiling range: °C >100 °F >212

Melting point / melting range: °C >0 °F >32

flash point: °C >90 °F >160

Autoignition Temperature: °C No data available °F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition: Carbon oxides.
products:
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.

Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Acute aquatic toxicity: Not classified for acute.

Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None

Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US State Regulations:

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

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Visit our web site for more information: www.kitpcr.com / email kitpcr@bioingentech.com - info@bioingentech.com.

US Federal Regulations:

SARA 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: PCR grade Water

Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd.

Address: Bernardo O'Higgins 1213. Concepción, Chile.

Phone: (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification

Signal Word: None

Health hazards: Not classified

Physical hazards: Not classified

Hazard Statements: Not Applicable

Precautionary: Not Applicable

Statements:

Principle Routes of Exposure

Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.

Skin: May cause skin irritation in susceptible persons.

Inhalation: May be harmful by inhalation.

Ingestion: May be harmful if swallowed.

Specific effects:

Carcinogenic effects: None.

Mutagenic effects: None.

Reproductive toxicity: None.

Sensitization: None.

Target Organ Effects: None under normal use conditions.

HMIS:

Health: 0

Flammability: 0

Reactivity: 0

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed: Not Applicable

Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.

Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Skin and Body Protection: Lightweight protective clothing.

Hand protection: Impervious gloves.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Eye protection: Wear safety glasses with side shields (or goggles).

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form: Liquid

Appearance: No information available

Odor: No data available

Odor Threshold: No data available

Boiling point / boiling range: °C >100 °F >212

Melting point / melting range: °C >0 °F >32

flash point: °C >90 °F >160

Autoignition Temperature: °C No data available °F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition products: Carbon oxides.
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.

Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None

Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US Federal Regulations:

SARA 313
This product is not regulated by SARA.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contains HAPs.

US State Regulations:

California Proposition 65
This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

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Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: Exogenous RNA control

Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd.

Address: Bernardo O'Higgins 1213. Concepción, Chile.

Phone: (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification

Signal Word: None

Health hazards: Not classified

Physical hazards: Not classified

Hazard Statements: Not Applicable

Precautionary: Not Applicable

Statements:

Principle Routes of Exposure

Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.

Skin: May cause skin irritation in susceptible persons.

Inhalation: May be harmful by inhalation.

Ingestion: May be harmful if swallowed.

Specific effects:

Carcinogenic effects: None.

Mutagenic effects: None.

Reproductive toxicity: None.

Sensitization: None.

Target Organ Effects: None under normal use conditions.

HMIS:

Health: 0

Flammability: 0

Reactivity: 0

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed: Not Applicable

Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.

Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Skin and Body Protection: Lightweight protective clothing.

Hand protection: Impervious gloves.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Eye protection: Wear safety glasses with side shields (or goggles).

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form: Liquid

Appearance: No information available

Odor: No data available

Odor Threshold: No data available

Boiling point / boiling range: °C >100 °F >212

Melting point / melting range: °C >0 °F >32

flash point: °C >90 °F >160

Autoignition Temperature: °C No data available °F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition: Carbon oxides.
products:
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.
Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None
Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US Federal Regulations:

SARA 313
This product is not regulated by SARA.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contains HAPs.

US State Regulations:

California Proposition 65
This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

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Material Safety Data Sheet - RNA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture:

Product name: Exogenous RNA control Primer and Probes Mix
Kit Name: Hantavirus

Company/undertaking identification:

Manufacturer/Supplier: Bioingentech Ltd. **Address:** Bernardo O'Higgins 1213. Concepción, Chile. **Phone:** (56)-41-2790435

SECTION 2: Hazards identification

GHS - Classification		Principle Routes of Exposure		Specific effects:		HMIS:	
Signal Word:	None	Potential Health Effects:		Carcinogenic effects:	None.	Health:	0
Health hazards:	Not classified	eyes:	May cause eye irritation with susceptible persons.	Mutagenic effects:	None.	Flammability:	0
Physical hazards:	Not classified	Skin:	May cause skin irritation in susceptible persons.	Reproductive toxicity:	None.	Reactivity:	0
Hazard Statements:	Not Applicable	Inhalation:	May be harmful by inhalation.	Sensitization:	None.		
Precautionary:	Not Applicable	Ingestion:	May be harmful if swallowed.	Target Organ Effects:	None under normal use conditions.		
Statements:							

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Glycerol 56-81-5 (10-30)	56-81-5	200-289-5	10-30

The product contains no substances which at their given concentration, are considered to be hazardous to health.

SECTION 4: First aid measures

Skin contact: Rinse cautiously with water for several minutes. If symptoms occur, obtain medical advice.
Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion: Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.
Inhalation: Remove to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.
Most important symptoms and effects, both acute and delayed: Not Applicable
Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media: Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.
Specific hazards arising from the chemical: Not known

SECTION 6: Accidental release measures

Personal precautions: Use personal protection equipment.
Methods for cleaning up: Soak up with inert absorbent material.

Environmental precautions:

Prevent further leakage or spillage if safe to do so.
 See Section 12 for more information.

SECTION 7: Handling and storage

Handling: Always wear recommended Personal Protective Equipment. No special handling advices are necessary.
Storage: Keep in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Exposure Limits:

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None

Engineering measures: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment: Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment.	Skin and Body Protection:	Lightweight protective clothing.
Hand protection:	Impervious gloves.	Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.
Eye protection:	Wear safety glasses with side shields (or goggles).		

Environmental exposure controls: No special environmental precautions required.

SECTION 9: Physical and chemical properties

General information:

Form:	Liquid	Boiling point / boiling range:	°C >100	°F >212
Appearance:	No information available	Melting point / melting range:	°C >0	°F >32
Odor:	No data available	flash point:	°C >90	°F >160
Odor Threshold:	No data available	Autoignition Temperature:	°C No data available	°F No data available

Evaporation rate: No data available
Flammability (solid, gas): No data available
Oxidizing properties: No information available
Water solubility soluble: soluble
Upper explosion limit: No data available
Lower explosion limit: No data available

Partition coefficient: No data available
n-octanol/water:
Vapor Pressure: No data available
vapor density: No data available
Viscosity: No data available
pH value: 6-8

SECTION 10: Stability and reactivity

Stability: Stable under normal conditions.
Materials to avoid: Strong acids and oxidizing agents.
Acetic anhydride. Isocyanates. Ammonia. Bases.
Possibility of hazardous reactions: Hazardous reaction has not been reported

Hazardous decomposition: Carbon oxides.
products:
polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None under normal processing.

SECTION 11: Toxicological information

Acute Toxicity:

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m ³ (Rat)

Principle Routes of Exposure Potential Health Effects:

eyes: May cause eye irritation with susceptible persons.
Skin: May cause skin irritation in susceptible persons.
Inhalation: May be harmful by inhalation.
Ingestion: May be harmful if swallowed.
Carcinogenic effects: None.
Mutagenic effects: None.
Reproductive toxicity: None.
Sensitization: None.
Target Organ Effects: None under normal use conditions

SECTION 12: Ecological information

Ecotoxicity: Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.
Chronic aquatic toxicity: Not classified chronic.
Mobility: Log Pow.
Biodegradation: Inherently biodegradable.
Bioaccumulation: Material does not bioaccumulate.

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Glycerol		Daphnia magna EC50>500 mg/L (24h)			logPow-1.76

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information

IATA

Proper Shipping Name: No dangerous good in sense of these transport regulations
Hazard Class: None
Subsidiary class: None
Packing group: None
UN-No: None
Environmental hazards: None

SECTION 15: Regulatory information

Component	US TSCA
Glycerol 56-81-5 (10-30)	Listed

US Federal Regulations:

SARA 313
This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contains HAPs.

US State Regulations:

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class:

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision: SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

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