



MATERIAL SAFETY DATA SHEET (MSDS)

Kit Name: VitroView™ Oil Red O Stain Kit
SKU #: VB-3007

Revision Date: 01-16-2017

Components:

VB-3007-1	Pre-Stain Solution
VB-3007-2	Oil Red O Solution
VB-3007-3	Differentiation Solution
VB-3007-4	Mayer's Hematoxylin Solution

VB-3007-1 Pre-Stain Solution MSDS

1. Identification of the Substance/Mixture and Company

Identification of the substance or mixture

Product Name Pre-Stain Solution
Product Number VB-3007 -1
Product Description Kit Component

Manufacturer/Supplier

VitroVivo Biotech, LLC. 405 E Gude Dr. Suite 214 Rockville, MD 20850
Phone: 301-500-0499 Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Composition / information on ingredients

Name	CAS #
Propylene glycol	57-55-6

3. Hazards identification

Potential Acute Health Effects: Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of inhalation.

Potential Chronic Health Effects: Slightly hazardous in case of skin contact (sensitizer). The substance may be toxic to central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

4. First Aid Measures

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: N/A

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: N/A

5. Fire fighting Measures

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 371°C (699.8°F)

Flash Points: CLOSED CUP: 99°C (210.2°F). OPEN CUP: 107°C (224.6°F) (Cleveland).

Flammable Limits: LOWER: 2.6% UPPER: 12.5%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: N/A

Risks of explosion of the product in presence of static discharge: N/A

Fire Fighting Media and Instructions:

Small Fire: Use DRY chemical powder.

Large Fire: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:

When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: N/A

6. Accidental release measures

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. Handling and storage

Precautions: Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk; evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis, moisture.

Storage: Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

8. Exposure Controls/Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 10 (mg/m³) from AIHA Consult local authorities for acceptable exposure limits.

9. Physical and Chemical Properties

Physical state	Liquid
Color	Colorless. Clear
Odor	Practically Odorless.
pH(1% soln/water)	N/A
Boiling point	188°C (370.4°F)
Melting Point	-59°C (-74.2°F)
Specific Gravity	1.036 (Water = 1)
Vapor pressure	0.08 mmHg at 20°C, 0.129 mmHg at 25°C
Vapor density	2.62 (Air = 1)
Relative density	0.79
Viscosity	Kinematic (room temperature): <0.205 cm ² /S (20.5cst)
Volatility	N/A
Water/Oil Dist. Coeff	The product is more soluble in water; log(oil/water) = -0.9
Ionicity (in Water)	N/A
Solubility	Soluble in cold water, hot water, acetone

10. Stability and Reactivity

Stability: The product is stable.

Instability Temperature: N/A

Conditions of Instability: Incompatible materials, excess heat, exposure to moist air or water.

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Hygroscopic; keep container tightly closed. Incompatible with chloroformates, strong acids (nitric acid, hydrofluoric acid), caustics, aliphatic amines, isocyanates, strong oxidizers, acid anhydrides, silver nitrate, reducing agents.

Special Remarks on Corrosivity: N/A

Polymerization: Will not occur.

11. Toxicology Information

Routes of Entry: Absorbed through skin and eye contact.

Toxicity to Animals: Acute oral toxicity (LD50): 18500 mg/kg [Rabbit]. Acute dermal toxicity (LD50): 20800 mg/kg [Rabbit].

Chronic Effects on Humans: May cause damage to the following organs: central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant, permeator), of inhalation.

Special Remarks on Toxicity to Animals: N/A

Special Remarks on Chronic Effects on Humans: May affect genetic material (mutagenic). May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: May cause mild skin irritation. It may be absorbed through the skin and cause systemic effects similar to those of ingestion.

Eyes: May cause mild eye irritation with some immediate, transitory stinging, lacrimation, blepharospasm, and mild transient conjunctival hyperemia. There is no residual discomfort or injury once it is washed away.

Inhalation: May cause respiratory tract irritation.

Ingestion: It may cause gastrointestinal tract irritation. It may affect behavior/central nervous (CNS depression, general anesthetic, convulsions, seizures, somnolence, stupor, muscle contraction spasticity, coma), brain (changes in surface EEG), metabolism, blood (intravascular hemolysis, white blood cells - decreased neutrophil function), respiration (respiratory stimulation, chronic pulmonary edema, cyanosis), cardiovascular system (hypotension, bradycardia, arrhythmias, cardiac arrest), endocrine system (hypoglycemia), urinary system (kidneys), and liver.

Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause allergic contact dermatitis.

Ingestion: Prolonged or repeated ingestion may cause hyperglycemia and may affect behavior/CNS (symptoms similar to that of acute ingestion).

Inhalation: Prolonged or repeated inhalation may affect behavior/CNS (with symptoms similar to ingestion), and spleen.

12. Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): >5000 mg/l 24 hours [Goldfish]. >10000 mg/l 48 hours [guppy]. >10000 mg/l 48 hours [water flea].

BOD5 and COD: N/A

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: N/A

13. Disposal Considerations

Waste treatment methods: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product

14. Transport Information

DOT (US) Classification: Not a DOT controlled material.

Identification: N/A

Special Provisions for Transport: N/A

15. Regulatory Information

Federal and State Regulations: Pennsylvania RTK: Propylene glycol Minnesota: Propylene glycol TSCA 8(b) inventory: Propylene glycol.

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

DSCL (EEC): R21/22- Harmful in contact with skin and if swallowed. S24/25- Avoid contact with skin and eyes.

HMS (U.S.A.): Health Hazard: 2 Fire Hazard: 1 Reactivity: 0 Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 0 Flammability: 1 Reactivity: 0 Specific hazard: 0

Protective Equipment: Gloves, Lab coat, Vapor respirator, Be sure to use an approved/certified respirator or equivalent, Splash goggles.

16. Other Information

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Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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VB-3007-2 Oil Red O Solution MSDS

1. Identification of the Substance/Mixture and Company

Identification of the substance or mixture

Product Name Oil Red O Solution
Product Number VB-3007-2
Product Description Kit Component

Manufacturer/Supplier

VitroVivo Biotech, LLC. 405 E Gude Dr. Suite 214 , Rockville, MD 20850
Phone: 301-500-0499 Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Composition/information on ingredients

Composition:

Name	CAS #	% by Weight
Oil red O	1320-06-5	<1
Propylene glycol	57-55-6	

3. Hazards Identification

Potential Acute Health Effects: Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.

Potential Chronic Health Effects: Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.

4. First Aid Measures

Eye Contact: No known effect on eye contact, rinse with water for a few minutes.

Skin Contact: After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion: Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

5. Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available

Special Remarks on Explosion Hazards: Not available.

6. Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority

requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7. Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust.

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

8. Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: N/A

9. Physical and Chemical Properties

Physical state and appearance	Solid.
Odor	N/A
Taste	N/A
Molecular Weight	408.5 g/mole
Color	N/A
pH (1% soln/water)	N/A
Boiling Point	N/A
Melting Point	Decomposes.
Critical Temperature	N/A
Specific Gravity	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Volatility	N/A
Odor Threshold	N/A
Water/Oil Dist. Coeff.	N/A
Ionicity (in Water)	N/A
Dispersion Properties	N/A
Solubility	N/A

10. Stability and Reactivity Data

Stability:	The product is stable.
Instability Temperature:	N/A
Conditions of Instability:	N/A
Incompatibility with various substances:	N/A
Corrosivity:	Non-corrosive in presence of glass.
Special Remarks on Reactivity:	N/A
Special Remarks on Corrosivity:	N/A
Polymerization:	No

11. Toxicology Information

Routes of Entry:	Ingestion.
Toxicity to Animals:	LD50: N/A LC50: N/A
Chronic Effects on Humans:	N/A
Other Toxic Effects on Humans:	

Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.

Special Remarks on Toxicity to Animals: N/A

Special Remarks on Chronic Effects on Humans: N/A

Special Remarks on other Toxic Effects on Humans: N/A

12. Ecological Information

Ecotoxicity: N/A

BOD5 and COD: N/A

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: N/A

13. Disposal Considerations

Product: Observe all federal, state, and local environmental regulations.

Contaminated packaging: Dispose of as unused product.

14. Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: N/A

Special Provisions for Transport: N/A

15. Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Oil red O

Other Regulations: N/A

DSCL (EEC):

This product is not classified according to the EU regulations.

HMIS (U.S.A.):

Health Hazard: 1 Fire Hazard: 1 Reactivity: 0 Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1 Flammability: 1 Reactivity: 0 Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Safety glasses.

16. Other Information

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Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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VB-3007-3 Differentiation Solution MSDS

1. Identification of the Substance/Mixture and Company

Identification of the substance or mixture

Product Name Differentiation Solution
Product number VB-3007 -3
Product Description Kit Component

Manufacturer/Supplier

VitroVivo Biotech, LLC. 405 E Gude Dr. Suite 214 Rockville, MD 20850
Phone: 301-500-0499 Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Composition / information on ingredients

Substance / Mixture : Mixture

Chemical Name	CAS-No.	Concentration (% w/w)
Propylene glycol	57-55-6	$\geq 20 - < 30$
Acetic acid	64-19-7	$\geq 0.1 - < 1$

3. Hazards Identification

GHS Classification Not a hazardous substance or mixture.
GHS Label element Not a hazardous substance or mixture.
Other hazards None known.

4. First Aid Measures

General advice Do not leave the victim unattended
If inhaled Move to fresh air.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
In case of skin contact If on skin, rinse well with water.
In case of eye contact Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.
If swallowed Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Rinse mouth with water
Most important symptoms and effects, both acute and delayed: None known
Notes to physician The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

5. Fire-fighting Measures

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Specific hazards during fire fighting N/A
Hazardous combustion products No hazardous combustion products are known
Further information Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up: Wipe up with absorbent material (e.g. cloth, fleece).
 Keep in suitable, closed containers for disposal. Use neutralizing agents

7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

Specific end use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure Controls/Personal Protection

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (form of exposure)	Control parameter Permissible concentration	Basis
Propylene glycol	57-55-6	TWA	10 mg/m ³	US WEEL
Acetic acid	64-19-7	TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGH
		TWA	10 ppm 25 mg/m ³	NIOSH REL
		ST	15 ppm 37 mg/m ³	NIOSH REL
		TWA	10 ppm 25 mg/m ³	OSHA-Z1
		TWA	10 ppm 25 mg/m ³	OSHA P0

Engineering measures: N/A

Personal protective equipment

Respiratory protection	No personal respiratory protective equipment normally required.
Hand protection:	Protective gloves
Eye protection	Safety glasses
Skin and body protection	Protective suit

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

9. Physical and Chemical Properties

Appearance Form	liquid, clear, viscous Colour: colourless
Odour	No data available
Odour Threshold	N/A
pH	N/A
Melting point/freezing point	N/A
Melting point/range	-60 °C (-76 °F) - lit.
Boiling point and boiling range	103 °C (217 °F)
Flash point	does not flash
Evaporation rate	N/A
Flammability (solid, gas)	N/A
Upper explosion limit	12.5 %(V)
Lower explosion limit	2.6 %(V)
Vapour pressure	0.11 hPa (0.08 mmHg) at 20 °C (68 °F)
Vapour density	2.63 - (Air = 1.0)
Relative density	1.036 g/cm ³ at 25 °C (77 °F)
Relative vapour density	2.63 - (Air = 1.0)
Water solubility	N/A
Partition coefficient: noctanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidizing properties	N/A

10. Stability and Reactivity

Reactivity	N/A
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	N/A
Conditions to avoid	N/A
Incompatible materials	N/A
Hazardous decomposition products	N/A

11. Toxicology Information

Acute toxicity

Not classified based on available information.

Acute oral toxicity

Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity

Acute toxicity estimate: > 30000 ppm

Exposure time: 4 h

Test atmosphere: gas

Method: Calculation method

Ingredients:

Propylene glycol:

Acute oral toxicity

LD50 (Rat): 20,000 mg/kg

LD50 (Mouse): 20,300 mg/kg

Acute inhalation toxicity

Acute toxicity estimate: > 30 mg/l

Method: Expert judgment

Acute dermal toxicity

LD50 (Rabbit): 20,800 mg/kg

Respiratory or Skin corrosion/irritation

Skin sensitization

Not classified based on available information.

Respiratory sensitization

N/A

Germ cell mutagenicity

N/A

Acetic acid:

Genotoxicity in vitro

Test Type: Ames test

Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)

Result: negative

Remarks: In vitro tests did not show mutagenic effects

Method: OECD Test Guideline 473 Remarks: In vitro tests did not show mutagenic effects

Germ cell mutagenicity Assessment

Not mutagenic test in Ames

Carcinogenicity:

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

12. Ecological Information

Ecotoxicity

Toxicity

Aquatic toxicity	No further relevant information available.
Persistence and degradability	N/A
Behavior in environmental systems:	
Bioaccumulative potential	N/A
Mobility in soil	N/A

Additional ecological information:

General notes

Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

PBT	N/A
vPvB	N/A
Other adverse effects	N/A

13. Disposal Considerations

Waste treatment methods Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings Recommendation:

Disposal must be made according to official regulations. Water, if necessary with cleansing agents.

14. Transport information

DOT (US)	Not dangerous goods
IMDG	N/A
IATA	N/A

15. Regulatory information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Propane-1,2-diol CAS-No. 57-55-6 Revision Date 2007-03-01

New Jersey Right To Know Components

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other information

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ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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VB-3007-4 Mayer's Hematoxylin Solution (MSDS)

1. Identification of the Substance/Mixture and Company

Identification of the substance or mixture

Product Name Mayer's Hematoxylin Solution
Product number VB-3007-4
Product Description Kit Component

Manufacturer/Supplier

VitroVivo Biotech, LLC 405 E Gude Dr. Suite 214, Rockville, MD 20850
Phone: 301-500-0499 Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Composition/Information on Ingredients

Composition:

Name	CAS #	% by weight
Hematoxylin	517-28-2	0.1
Sodium Iodate	7681-55-2	0.01
Aluminum Ammonium Sulfate	7784-26-1	5
Acetic Acid	64-19-7	<2
Water	7732-18-5	Balance

3. Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Hazard statement(s)

H302 Harmful if swallowed.

Precautionary statement(s)

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

4. First Aid Measures

Description of first aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Wash off with soap and plenty of water. Consult a physician.

In case of eye contact Flush eyes with water as a precaution.

If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section

11

Indication of any immediate medical attention and special treatment needed No data available

5. Firefighting Measures

Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture No data available

Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

Further information No data available

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

Environmental precautions Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections For disposal see section 13.

7. Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Air and light sensitive.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Exposure controls

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure Do not let product enter drains.

9. Physical and Chemical Properties

General information

Form	Liquid
Appearance	N/A
Odor	N/A
Odor Threshold	N/A
Evaporation rate	N/A
Flammability (solid, gas)	N/A

Oxidizing properties	N/A
Water solubility	N/A
Upper explosion limit	N/A
Lower explosion limit	N/A
Vapor Pressure	N/A
Vapor density	N/A
Viscosity	N/A
pH value	N/A
Boiling point / boiling range °C	N/A
Melting point / melting range °C	N/A
flash point °C	N/A
Autoignition Temperature °C	N/A

10. Stability and Reactivity

Reactivity:	N/A
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	N/A
Conditions to avoid:	N/A
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	Formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO _x), Sulphur oxides, Hydrogen chloride gas, Aluminum oxide
Other decomposition products	N/A

11. Toxicology Information

Information on toxicological effects

Acute toxicity

No toxicology information is available.

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.

12. Ecological Information

Toxicity:	N/A
Persistence and degradability:	N/A
Bioaccumulative potential:	N/A
Mobility in soil:	N/A
Results of PBT and vPvB assessment:	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects:	N/A

13. Disposal compositions

Dispose of contents/containers in accordance with local regulations.

14. Transport information

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. Regulatory information

DOT Not regulated

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 contain 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.

16. Other information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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