



Kit Summary

ProductCode(s) VB-3021
Productname Rhodanine Copper Stain Kit

Hematoxylin (Modified Mayer's Solution)

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Glycerol	200-289-5	56-81-5	30	-	-
Aluminium sulfate	-	7784-31-8	5	Eye Dam. 1 (H318)	-
Acetic acid	200-580-7	64-19-7	2	Skin Corr. 1A (H314) Flam Liq. 3 (H226)	-
Haematoxylin	-	517-28-2	1	Eye Irrit. 2 (H319)	-

Rhodanine Solution

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Ethanol	200-578-6	64-17-5	94.6	Flam. Liq. 2 (H225)	-
Isopropanol	200-661-7	67-63-0	5	STOT SE 3(H336) Eye Irrit. 2 (H319) Flam Liq. 2(H225)	-

Acetate Buffer Solution

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
2-methyl-4-isothiazolin-3-one	220-239-6	2682-20-4	0.1	STOT SE 3(H335) Skin Corr. 1B (H314) Eye Dam. 1(H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Aquatic Acute 1 (H400)	-
5-Bromo-5-nitro-1,3-dioxane	250-001-7	30007-47-7	0.1	STOT RE 2(H373) Skin Corr. 1A (H314) Eye Dam. 1(H318) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-

GHS / CLP - GHS - Classification

**Signal Word**

Danger

Hazard statements

H318 - Causes serious eye damage

H225 - Highly flammable liquid and vapor

H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P370 + P378 - In case of fire: Use foam for extinction

P264 - Wash face, hands and any exposed skin thoroughly after handling

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/ physician

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P233 - Keep container tightly closed

P403 + P235 - Store in a well-ventilated place. Keep cool

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

2.3 Other information

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

TRANSPORT INFORMATION**DOT**

Proper shipping name	Excepted Quantity Flammable Liquids, N.O.S. (Ethanol and Isopropanol)
Hazard class	3
UN/IDNo	UN1993
Packinggroup	II

IATA

UN/IDNo	Excepted Quantity UN1993
Proper shipping name	Flammable Liquids, N.O.S. (Ethanol and Isopropanol)
Hazardclass	3
Packinggroup	II

ADR

Proper shipping name	Excepted Quantity Flammable Liquids, N.O.S. (Ethanol and Isopropanol)
Hazard class	3
UN/IDNo	UN1993
Packinggroup	II



Issuing date Nodata available

Revision Date 05 - April-2021

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Productname Hematoxylin (Modified Mayer's Solution)

Recommendeduse For research use only

Shipping Address: 405 E. Gude Dr., Suite 214, Rockville, MD 20850

Billing Address: P.O. Box 83644, Gaithersburg, MD 20883

Phone: 800-260-9817 (Toll Free), 301-500-0499

Fax: 844-248-6208

Email: info@vitrovivo.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Serious eye damage/eye irritation

Category 1

GHS Label elements, including precautionary statements



Signal Word

Danger

Hazard statements

H318 - Causes serious eye damage

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/ physician

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Glycerol	56-81-5	15-40	-
Aluminium sulfate	7784-31-8	3-7	Eye Dam. 1 (H318)
Acetic acid	64-19-7	1-5	Skin Corr. 1A (H314) Flam Liq. 3 (H226)
Haematoxylin	517-28-2	1-5	Eye Irrit. 2 (H319)

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

4. FIRST AID MEASURES

General advice	Immediate medical attention is required.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.
Inhalation	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediate medical attention is required.
Notes to physician	Treat symptomatically.
Protection of first-aiders	Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flashpoint	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions Try to prevent the material from entering drains or water courses.

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

7. HANDLING AND STORAGE

Advice on safe handling Wear personal protective equipment. Ensure adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist.

Technical measures/Storage conditions Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol 56-81-5	TWA: 10 mg/m ³ mist	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	
Acetic acid 64-19-7	STEL: 15ppm TWA: 10ppm	TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25mg/m ³ STEL: 15 ppm STEL: 37mg/m ³

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection Tightly fitting safety goggles. Face-shield.

Skin and body protection Long sleeved clothing. Protective gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	PhysicalState@20°C	Liquid
pH	No information available		
Flash point	No information available	Autoignitiontemperature	No information available
Decompositiontemperature	No information available	Boiling point/boiling range	No information available
Meltingpoint/range	No information available		
		Flammability Limits in Air	No information available
Explosionlimits	No information available		
		solubility	No information available.
SpecificGravity	No data available	Vapor Pressure @20°C (kPa)	No information available
Evaporationrate	No information available	VOCContent(%)	32
Vapordensity	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storageconditions.
Incompatibleproducts	None known based on information supplied.
Conditionsto avoid	None known based on information supplied.
Hazardous decomposition products	None known based on informationsupplied.
Hazardouspolymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

ProductInformation	Corrosive to skin, eyes and/or respiratory tract.
Eyecontact	Causes eye damage

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	Rat - 12,600 mg/kg	Rabbit - >10,000 mg/kg	
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h

Chronic toxicity

Chronicitytoxicity	Avoid repeated exposure
TargetOrgan Effects	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Glycerol		51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static		500: 24 h Daphnia magna mg/L EC50
Acetic acid		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static		47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static
Chemical Name		log Pow		
Glycerol		0		
Acetic acid		-0.31		

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Acetic acid	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances

Acetic acid	5000 lb			X
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CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Acetic acid	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Glycerol	X	X	X		X
Acetic acid	X	X	X		X

International Regulations

Chemical Name	Carcinogen Status	Exposure limits
Glycerol		Mexico: TWA 10 mg/m ³
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m ³ Mexico: STEL 15 ppm Mexico: STEL 37 mg/m ³

WHMIS Note:

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

Full text of H-Statements referred to under sections 2 and 3

H318 - Causes serious eye damage H314 - Causes severe skin burns and eye damage H226 - Flammable liquid and vapor H319 - Causes serious eye irritation

Hazard statements

H318 - Causes serious eye damage

Revision Date

21-Aug-2020

Revision Note

No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS



Safety DataSheet

Issuing date Nodata available

Revision Date 05-April-2021

Version 10

1. PRODUCT AND COMPANY IDENTIFICATION

Productname Rhodanine Solution
UN/IDNo UN1993
Recommendeduse For research use only

Shipping Address: 405 E. Gude Dr., Suite 214, Rockville, MD 20850

Billing Address: P.O. Box 83644, Gaithersburg, MD 20883

Phone: 800-260-9817 (Toll Free), 301-500-0499

Fax: 844-248-6208

Email: info@vitrovivo.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Flammable liquids

Category 2

GHS Label elements, including precautionary statements



Signal Word

Danger

Hazard statements

H225 - Highly flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P264 - Wash face, hands and any exposed skin thoroughly after handling

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P370 + P378 - In case of fire: Use foam for extinction

P233 - Keep container tightly closed

P403 + P235 - Store in a well-ventilated place. Keep cool

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

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Ethanol	64-17-5	60-99	Flam. Liq. 2 (H225)
Isopropanol	67-63-0	3-7	STOT SE 3(H336) Eye Irrit. 2 (H319) Flam Liq. 2(H225)

For the full text of the H-Statements mentioned in this Section, see Section 16**4. FIRST AID MEASURES**

General advice	If symptoms persist, call a physician.
Eyecontact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
Skincontact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Rinse mouth. If symptoms persist, call a physician.
Notesto physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammableproperties	Not flammable.
Flashpoint	not determined

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions Try to prevent the material from entering drains or water courses.

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

7. HANDLING AND STORAGE

Advice on safe handling Ensure adequate ventilation. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist.

Technical measures/Storage conditions Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
Isopropanol 67-63-0	STEL: 400ppm TWA: 200ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980mg/m ³ STEL: 500ppm STEL: 1225 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Engineering measures Showers
Eyewashstations
Ventilation systems

Personal protective equipment

Eye/face protection Tightly fitting safety goggles. Face-shield.
Skin and body protection Long sleeved clothing. Protective gloves.
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	Liquid
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOC Content(%)	99.5999984741211
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products None known based on information supplied.

Conditions to avoid None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	7060 mg/kg (Rat)		124.7 mg/L (Rat) 4 h
Isopropanol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h

Chronic toxicity

Chronic toxicity Avoid repeated exposure May cause adverse liver effects Contains a known or suspected reproductive toxin

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol	A3		Known	X
Isopropanol		Group1 Group3		X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Ethanol		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephalespromelas mg/L LC50 static 13400 - 15100: 96 h Pimephalespromelas mg/L LC50 flow-through		9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static
Isopropanol	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephalespromelas mg/L LC50 flow-through 11130: 96 h Pimephalespromelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50		13299: 48 h Daphnia magna mg/L EC50
Chemical Name		log Pow		
Ethanol		-0.32		
Isopropanol		0.05		

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Ethanol	Toxic Ignitable
Isopropanol	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT Excepted Quantity
Proper shipping name Flammable Liquids, N.O.S. (Ethanol and Isopropanol)
Hazard class 3
UN/ID No UN1993
Packing group II

IATA Excepted Quantity
UN/IDNo UN1993
Proper shipping name Flammable Liquids, N.O.S. (Ethanol and Isopropanol)
Hazard class 3
Packing group II

ADR Excepted Quantity
Proper shipping name Flammable Liquids, N.O.S. (Ethanol and Isopropanol)
Hazard class 3
UN/IDNo UN1993
Packing group II

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Isopropanol	67-63-0	5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard yes
Chronic Health Hazard no
Fire Hazard no
Sudden Release of Pressure Hazard no
Reactive Hazard no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Ethanol	64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethanol	X	X	X		X
Isopropanol	X	X	X		X

International Regulations

Chemical Name	Carcinogen Status	Exposure limits
Ethanol		Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m ³
Isopropanol		Mexico: TWA 400 ppm Mexico: TWA 980 mg/m ³ Mexico: STEL 500 ppm Mexico: STEL 1225 mg/m ³

WHMIS Note:

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**Full text of H-Statements referred to under sections 2 and 3**

H225 - Highly flammable liquid and vapor H336 - May cause drowsiness or dizziness H319 - Causes serious eye irritation

Hazard statements

H225 - Highly flammable liquid and vapor

Revision Date 21-Aug-2020

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS



Safety DataSheet

Issuing date Nodata available

Revision Date 05-April-2021

Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Productname Acetate Buffer Solution

Recommendeduse For research use only

Shipping Address: 405 E. Gude Dr., Suite 214, Rockville, MD 20850

Billing Address: P.O. Box 83644, Gaithersburg, MD 20883

Phone: 800-260-9817 (Toll Free), 301-500-0499

Fax: 844-248-6208

Email: info@vitrovivo.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Skin sensitization	Category 1
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GHS Label elements, including precautionary statements



Signal Word
Warning

Hazard statements

H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, 1272/2008)

- P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
- P280 - Wear protective gloves/ eye protection/ face protection
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
- P363 - Wash contaminated clothing before reuse
- P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
5-Bromo-5-nitro-1,3-dioxane	30007-47-7	0.1-1	STOT RE 2(H373) Skin Corr. 1A (H314) Eye Dam. 1(H318) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
2-methyl-4-isothiazolin-3-one	2682-20-4	0.1-1	STOT SE 3(H335) Skin Corr. 1B (H314) Eye Dam. 1(H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Aquatic Acute 1 (H400)

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

4. FIRST AID MEASURES

Eyecontact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15minutes.
Skincontact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to freshair.
Ingestion	Clean mouth with water. Drink plenty ofwater.
Notesto physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammableproperties	Not flammable.
Flashpoint	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data

Sensitivity toMechanical Impact	None.
Sensitivity toStatic Discharge	None.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation.
Environmental precautions	Try to prevent the material from entering drains or water courses.
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Technical measures/Storage conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering measures	Showers Eyewash stations Ventilation systems
Personal protective equipment	
Eye/face protection	Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).
Skin and body protection	Long sleeved clothing. Protective gloves.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	8.00	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOCC content (%)	Not applicable
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible products	None known based on information supplied.
Conditions to avoid	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
5-Bromo-5-nitro-1,3-dioxane	455 mg/kg (Rat)		

Chronic toxicity

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods	Dispose of in accordance with federal, state, and local regulations.
Contaminated packaging	Do not re-use empty containers.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not dangerous goods
<u>IATA</u>	Not dangerous goods
<u>ADR</u>	Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

AcuteHealth Hazard	no
ChronicHealth Hazard	no
FireHazard	no
Sudden Release ofPressure Hazard	no
ReactiveHazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. StateRegulations**California Proposition65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations**International Regulations****WHMISNote:**

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**Full text of H-Statements referred to under sections 2 and 3**

H373 - May cause damage to organs through prolonged or repeated exposure H335 - May cause respiratory irritation H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage H317 - May cause an allergic skin reaction H301 - Toxic if swallowed H311 - Toxic in contact with skin H400 - Very toxic to aquatic life H302 - Harmful if swallowed H410 - Very toxic to aquatic life with long lasting effects

Hazard statements

H317 - May cause an allergic skin reaction

RevisionDate 21-Aug-2020

RevisionNote No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS