



VitroVivo Biotech

Make Tissues, Cells, Genes and Molecules Visible

Material Safety Data Sheet

Revision Date: 011-29-2016

Kit Name: VitroView™ Modified Gomori's Trichrome Stain Kit
SKU #: VB-3014

Components:

VB-3014-1	Gomori's Trichrome solution
VB-3014-2	Harris Hematoxylin solution

VB-3014-1 Gomori's Trichrome Solution MSDS

1. Identification of the Substance/Mixture and Company

Product Name	Gomori's Trichrome Solution
SKU#	VB-3014-1
Product Description	Kit Component
Manufacturer/Supplier	VitroVivo Biotech, LLC. 9605 Medical Center Dr., Suite 315, Rockville, MD 20850
Tel and Fax Number	Phone: 301-500-0499; Toll free: 1-800-260-9817; Fax: 844-248-6208

2. Hazards Identification

Emergency Overview: May cause skin, eye, and respiratory tract irritation. The toxicological properties have not been fully investigated.

Appearance Green.

Physical State Liquid.

Odor No information available

Target Organ Effects None known.

Potential Health Effects

Acute Effects Principle Routes of Exposure

Eyes May cause irritation. Skin May cause irritation. Inhalation May cause irritation of respiratory tract. May be harmful if inhaled. Ingestion May cause irritation. May be harmful if swallowed.

Chronic Effects none known.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available.

3. Composition

CAS#	Chemical Name:	Percent	EINECS /ELINCS
4197-07-3	Chromotrope	<1%	224-085-0
2353-45-9	Fast Green FCF	<1%	219-091-5
12501-23-4	Phosphotungstic acid hydrate	<1%	Not available
64-19-7	Acetic Acid	1%	200-580-7
7732-18-5	water	Balance	231-791-2

4. First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion Do not induce vomiting. Obtain medical attention.

Notes to Physician Treat symptomatically.

5. Firefighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. **Autoignition**

Temperature: Not applicable.

Explosion Limits:

Lower: 5.4

Upper: 16.0

Flash Point: > 93°C (> 199.40°F)

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

6. Accidental Release Measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal

7. Handling and Storage

Handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure Controls/Personal Protection

Engineering Measures ensure that eye wash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Chemical Name	ACGIH	NIOSH	OSHA
Chromotrope	None listed	None listed	None listed
Fast Green FC	None listed	None listed	None listed
Phosphotungstic acid hydrate	5 mg/m ³ TWA (as W) (listed under Tungsten, insoluble compounds) 10 mg/m ³ STEL (as W) (listed under Tungsten, insoluble compounds)	5 mg/m ³ TWA (as W) (listed under Tungsten, insoluble compounds)	None listed
Acetic Acid	10 ppm TWA, 15 ppm STEL	10 ppm TWA; 25 mg/m ³ TWA; 50 ppm IDLH	10 ppm TWA; 25 mg/m ³ TWA
Water	None listed	None listed	None listed

Personal Protective Equipment Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. Physical and Chemical Properties

Physical State Liquid

Appearance Green

Odor No information available

pH No information available.

Vapor Pressure Vapor Pressure

Vapor Density No information available.

Viscosity No information available.

Boiling Point/Range Not applicable

Melting Point/Range No information available.

Decomposition temperature (°C) No information available.

Flash Point Not applicable

Evaporation Rate No information available.

Specific Gravity No information available.

Solubility No information available.

10 Stability and Reactivity

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions. None under normal processing..

11. Toxicology Information

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	
Water	90000 mL/kg (Rat)	Not listed	Not listed	
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit	11.4 mg/L (Rat) 1 h	

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Endocrine Disruptor Information No information available

12. Ecological Information

Ecotoxicity .

No information found

13. Disposal Considerations

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport Information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. Regulatory Information

US Federal

TSCA

CAS# 4197-07-3 is not listed on the TSCA Inventory. It is for research and development use only.

CAS# 2353-45-9 is listed on the TSCA Inventory.

CAS# 12501-23-4 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory. (40CFR720.3(u)(2)).

CAS# 64-19-7 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

Health and Safety Reporting List None of the components are on this list.

Chemical Test Rules None of the components are on this list.

TSCA Section 12b None of the components are on this list

TSCA Significant New Use Rule (SNUR) None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances None of the components are on this list. **SARA Hazard**

Categories CAS# 2353-45-9: delayed. CAS# 64-19-7: immediate, delayed, fire.

SARA Section 313 None of the components are on this list.

Clean Air Act - Hazardous Air Pollutants (HAPs) None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors None of the components are on this list.

Clean Water Act - Hazardous Substances CAS# 64-19-7 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants None of the components are on this list.

Clean Water Act - Toxic Pollutants None of the components are on this list.

OSHA - Highly Hazardous None of the components are on this list.

OSHA - Specifically Regulated Chemicals None of the components are on this list.

US State

State Right to Know

Fast Green FCF can be found on the following state Right-to-Know lists: California. Acetic Acid can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. No information found

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: None listed

Risk Phrases: None listed

Safety Phrases: S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDSL CAS# 2353-45-9 is listed on Canada's DSL List. CAS# 64-19-7 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

Canadian WHMIS Classifications No information found This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List CAS# 12501-23-4 is not listed on the Canadian Ingredient Disclosure List.

CAS# 64-19-7 is listed on the Canadian Ingredient Disclosure List.

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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VB-3014-2 Harris Hematoxylin Solution MSDS

1. Identification of the Substance/Mixture and Company

Product Name	Harris Hematoxylin Solution
SKU#	VB-3014-2
Product Description	Kit Component
Manufacturer/Supplier	VitroVivo Biotech, LLC. 9605 Medical Center Dr., Suite 315, Rockville, MD 20850
Tel and Fax Number	Phone: 301-500-0499; Toll free: 1-800-260-9817; Fax: 844-248-6208

2. Hazards Identification

GHS Classifications

Health Hazards

H303 Acute Oral Toxicity: 5

H316 Skin Corrosion/ Skin Irritation: 3

H320 Eye Damage/ Irritation: 2B

Physical Hazards

Not Classified

Environmental Hazards

Acute Aquatic Environmental Hazards: Not Classified

Chronic Environmental Hazards: Not Classified

Pictograms or Hazard Symbols and Hazard Statement.

Precautionary Statement Prevention

H303 P312 Call a physician if you feel unwell.

H316

P313- If skin irritation occurs: Get medical advice/attention.

H320

P264 Wash 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. P337+P313 If eye irritation persists: Get medical advice/attention.

3. Composition

CAS#	Chemical Name:	Percent
517-28-2	Hematoxylin	0.5%
7784-25-0	Ammonium Alum	10%
7681-55-2	Sodium Iodate	0.04%
7732-18-5	water	Balance

4. First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

Oral Exposure: If Swallowing seek immediate medical advice.

Inhalation Exposure: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

5. Firefighting Measures

NFPA

HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 Firefighters should wear proper protective clothing and self contained breathing apparatus with full piece operated in positive pressure mode to prevent contact with skin and eyes. Water may be ineffective in fighting fire. Use water spray to keep for exposed containers cool.

Extinguishing Media: Use water spray, dry chemical powder, or appropriate foam.

Flash Point: N/A Auto ignition

Temperature: N/A

Explosion Limits: N/A Upper: N/A

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 0

6. Accidental Release Measures

Procedure(s) of Personal Precaution(s): Wear protective gear.

Methods for Cleaning up: Absorb with sand, earth or vermiculite. Carefully sweep up and containerize for proper disposal.

7. Handling and Storage

Handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure Controls/Personal Protection

Use care when handling. Avoid contact with skin, eyes and clothing. Store at room temperature.

9. Physical and Chemical Properties

Physical State: Liquid

Appearance: Brown

pH: N/A.

Vapor Pressure: 2.3 kPa @ 20deg. C

Vapor Density: 0.62 (Air=1)

Evaporation Rate: N/A **Viscosity:** N/A **Boiling Point:** 100 deg. C

10 Stability and Reactivity

Chemical Stability: Use care when handling. Avoid contact with skin, eyes and clothing. Store at room temperature.

Hazardous Decomposition Products: not known

Hazardous Polymerization: Will not occur.

11. Toxicology Information

Routes of exposure:

Multiple routes: May cause irritation, May be harmful by ingestion, or skin absorption. **CAS#**

517-28-2: No information available.

Solution Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7784-26-1: No information available.

Solution Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 517-28-2: No information available.

Solution Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

12. Ecological Information

Ecotoxicity:

CAS# 517-28-2: No information available.

7784-26-1: No information available.

CAS# 7681-55-2: No information available.

Solution Carcinogenicity: No information available

13. Disposal Considerations

Appropriate method of disposal of substance or preparation:

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved waste facility.

14. Transport Information

DOT Non-Regulated

15. Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

European/International Regulations European Labeling in Accordance with EC Directives

Risk Phrases: R36/38 Irritating to eyes and skin

Safety Phrases:

S3/7/9 Keep container closed in a cool, well-ventilated place

S24/25 Avoid contact with skin and eyes

S20/21 When using do not eat, drink or smoke

S2 Keep out of the reach of children.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S28 After contact with skin, wash immediately with plenty of soap and water

S37/39 Wear suitable gloves and eye/face protection

16. Other Information

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