Material Safety Data Sheet
Gill Hematoxylin 1X

ACC# 89163

Section 1 - Chemical Product and Company Identification

MSDS Name: Gill Hematoxylin 1X
Catalog Numbers: 23245652, 23245653, 245-652, 245-653, 245652, 245653, 56016-GA, 56016A
Synonyms: None.
Company Identification:
Fisher Diagnostics
Fisher Scientific Company, LLC
8365 Valley Pike
Middletown, VA 22645-0307

For information, call: 800-524-0294
Emergency Number: 800-524-0294
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>107-21-1</td>
<td>Ethylene Glycol</td>
<td>25</td>
<td>203-473-3</td>
</tr>
<tr>
<td>7784-31-8</td>
<td>Aluminum sulfate octadecahydrate</td>
<td>&lt; 2</td>
<td>unlisted</td>
</tr>
<tr>
<td>77-92-9</td>
<td>Citric acid anhydrous</td>
<td>&lt;1</td>
<td>201-069-1</td>
</tr>
<tr>
<td>517-28-2</td>
<td>Hematoxylin</td>
<td>&lt;1.0</td>
<td>208-237-3</td>
</tr>
<tr>
<td>7681-55-2</td>
<td>Sodium Iodate</td>
<td>&lt;1.0</td>
<td>231-672-5</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>Balance</td>
<td>231-791-2</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: maroon liquid. Warning! Harmful or fatal if swallowed. May cause allergic respiratory and skin reaction. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause central nervous system effects. May cause liver and kidney damage. This substance has caused adverse reproductive and fetal effects in animals. Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
**Ingestion:** May cause irritation of the digestive tract. May cause systemic toxicity with acidosis. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Ingestion produces toxicity that follows a three step progression. St age one involves the central nervous system, including paralysis of the eye muscles, convulsions and coma. Metabolic acidosis and cerebral swelling may also occur. In the second stage, cardiopulmonary symptoms appear. These are characterized by hypertension, rapid heart beat and possible cardiac failure. In the third stage there is kidney damage.

**Inhalation:** High vapor concentrations may cause drowsiness. May cause respiratory tract irritation. Heated or misted substance may cause headache, irregular eye movements, and possible coma. May cause allergic respiratory tract irritation.

**Chronic:** Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

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**Section 4 - First Aid Measures**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Notes to Physician:** Treat symptomatically and supportively.

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**Section 5 - Fire Fighting 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.

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

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 4; Instability: 0

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**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

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**Section 7 - Handling and Storage**
Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Glycol</td>
<td>100 mg/m3 Ceiling (aerosol only)</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Aluminum sulfate octadecahydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Citric acid anhydrous</td>
<td>none listed</td>
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<td>Sodium Iodate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Ethylene Glycol: No OSHA Vacated PELs are listed for this chemical. Aluminum sulfate octadecahydrate: No OSHA Vacated PELs are listed for this chemical. Citric acid anhydrous: No OSHA Vacated PELs are listed for this chemical. Hematoxylin: No OSHA Vacated PELs are listed for this chemical. Sodium Iodate: No OSHA Vacated PELs are listed for this chemical. Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment
Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: maroon
Odor: Odorless
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 120 deg C
Freezing/Melting Point: Not available.
Decomposition Temperature: Not available.
Solubility: Soluble in water.
Specific Gravity/Density: 1
Molecular Formula: Not available.
Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials: Acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anhydride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane), finely powdered metals, metal nitrates, aluminum, arsenic oxides, organics, phosphorus, metal sulfides, reducing agents.
Hazardous Decomposition Products: Oxides of sulfur, oxides of carbon.
Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#: 
CAS# 107-21-1: KW2975000
CAS# 7784-31-8: WS5697000
CAS# 77-92-9: GE7350000
CAS# 517-28-2: MH7875000
CAS# 7681-55-2: NN1400000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
CAS# 107-21-1:
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, eye: 100 mg/1H Mild;
Draize test, rabbit, eye: 0.012 ppm/3D;
Draize test, rabbit, eye: 1440 mg/6H Moderate;
Oral, mouse: LD50 = 5500 mg/kg;
Oral, rat: LD50 = 4700 mg/kg;
Skin, rabbit: LD50 = 9530 uL/kg;

CAS# 7784-31-8:
Oral, mouse: LD50 = 980 mg/kg;
Oral, rat: LD50 = 370 mg/kg;
CAS# 77-92-9:
Draize test, rabbit, eye: 750 ug/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, mouse: LD50 = 5040 mg/kg;
Oral, rat: LD50 = 3 gm/kg;

CAS# 517-28-2:

CAS# 7681-55-2:
Oral, mouse: LD50 = 505 mg/kg;

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg;

**Carcinogenicity:**
CAS# 107-21-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7784-31-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 77-92-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 517-28-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7681-55-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.
**Teratogenicity:** No data available.
**Reproductive Effects:** No data available.
**Neurotoxicity:** No data available.
**Mutagenicity:** No data available.
**Other Studies:** No data available.

### Section 12 - Ecological Information

**Ecotoxicity:** No data available. Cas# 107-21-1:LC50 (96Hr.)rainbow trout = 41000 mg/L;
20 degrees CLC50(96Hr.)bluegill = 27500-41000 mg/LLC50(96Hr.)goldfish = 27500-41000 mg/LLC50(48Hr.)water flea = 46300 mg/LEC50(30 minutes)Photobacterium phosphoreum = 3038 mg/L; Microtox test
**Environmental:** No information available.
**Physical:** No information available.
**Other:** No information available.

### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a
hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR
Parts 261.3. Additionally, waste generators must consult state and local hazardous waste
regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

### Section 14 - Transport Information
US FEDERAL

TSCA
CAS# 107-21-1 is listed on the TSCA inventory.
CAS# 7784-31-8 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# 77-92-9 is listed on the TSCA inventory.
CAS# 517-28-2 is listed on the TSCA inventory.
CAS# 7681-55-2 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs
CAS# 107-21-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 107-21-1: acute, chronic. CAS # 7784-31-8: acute, chronic. CAS # 77-92-9: acute.
CAS # 7681-55-2: acute, flammable.

Section 313
This material contains Ethylene Glycol (CAS# 107-21-1, 25%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:
CAS# 107-21-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 107-21-1 can be found on the following state right to know lists: California, New
Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 7784-31-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 77-92-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 517-28-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7681-55-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols:
Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)
CAS# 107-21-1: 0
CAS# 7784-31-8: No information available.
CAS# 77-92-9: 0
CAS# 517-28-2: 1
CAS# 7681-55-2: 1
CAS# 7732-18-5: No information available.

Canada - DSL/NDSL
CAS# 107-21-1 is listed on Canada's DSL List.
CAS# 77-92-9 is listed on Canada's DSL List.
CAS# 517-28-2 is listed on Canada's DSL List.
CAS# 7681-55-2 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D2A.

Canadian Ingredient Disclosure List
CAS# 107-21-1 is listed on the Canadian Ingredient Disclosure List.
CAS# 77-92-9 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 5/12/1999
Revision #3 Date: 2/11/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.