SAFETY DATA SHEET

MUCICARMINE STAINING KIT

Version 1.2
Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-24-2015

SECTION 1. IDENTIFICATION

Product name: MUCICARMINE STAINING KIT
Mat.-No./ Genisys-No.: 05279275001

Manufacturer or supplier’s details
Company name of supplier: Roche Diagnostics
Address: 9115 Hague Road
46250 Indianapolis IN
Telephone: 1-800-428-5074
Emergency telephone:
In case of emergencies: CHEMTREC
1-800-424-9300 (U.S. or Canada)
1-703-527-3887 (International)

Recommended use of the chemical and restrictions on use
Restrictions on use: For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit

GHS Label element
Hazard pictograms:

Signal Word: Danger

Hazard Statements:
H225 Highly flammable liquid and vapor.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350 May cause cancer.
H370 Causes damage to organs (Eyes).

Precautionary Statements:
Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P234 Keep only in original container.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P285 In case of inadequate ventilation wear respiratory protection.

Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P390 Absorb spillage to prevent material damage.

Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mucicarmine Stain**

**GHS Classification**

| Skin irritation | H315: Causes skin irritation. |
| Category 2 | |
| Eye irritation | H319: Causes serious eye irritation. |
Category 2A

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminiumchloride</td>
<td>7446-70-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

**Hematoxylin A**

**GHS Classification**

- Flammable liquids: H225: Highly flammable liquid and vapor.
- Category 2
- Carcinogenicity: H350: May cause cancer.
- Category 1A
- Specific target organ systemic toxicity - single exposure: H370: Causes damage to organs.

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>&gt;= 70 - &lt; 90</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
<tr>
<td>Hematoxylin cryst.</td>
<td>517-28-2</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

**Hematoxylin B**

**GHS Classification**

- Corrosive to Metals: H290: May be corrosive to metals.
- Category 1
- Skin corrosion: H314: Causes severe skin burns and eye damage.
- Category 1
- Serious eye damage: H318: Causes serious eye damage.
- Category 1

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III)-chloride hexahydrate</td>
<td>10025-77-1</td>
<td>&gt;= 1 - &lt; 5</td>
</tr>
</tbody>
</table>

**Tartrazine Counterstain**

**GHS Classification**

- Respiratory sensitization: H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Category 1
- Skin sensitization: H317: May cause an allergic skin reaction.
- Category 1

**Hazardous ingredients**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
<tr>
<td>Tartrazine</td>
<td>1934-21-0</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice:
Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled:
Call a physician or poison control center immediately.
Move to fresh air.
If unconscious place in recovery position and seek medical advice.

In case of skin contact:
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact:
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed:
Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed:
No information available.

Notes to physician:
The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media:
High volume water jet
Specific hazards during fire fighting: Do not allow run-off from fire fighting to enter drains or water courses.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Technical measures/Precautions : See label, package insert or internal guidelines

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Mucicarmine Stain
Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminiumchloride</td>
<td>7446-70-0</td>
<td>TWA</td>
<td>2 mg/m3 (Aluminum)</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>2 mg/m3 (Aluminum)</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

Hematoxylin A
Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm 1,900 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1,000 ppm 1,900 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1,000 ppm 1,900 mg/m3</td>
<td>OSHA P0</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm 260 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ST</td>
<td>250 ppm 325 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm 260 mg/m3</td>
<td>OSHA Z-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm 260 mg/m3</td>
<td>OSHA P0</td>
</tr>
</tbody>
</table>
Hazardous components without workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematoxylin cryst.</td>
<td>517-28-2</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>Methanol</td>
<td>Urine</td>
<td>End of shift (As soon as possible after exposure ceases)</td>
<td>15 mg/l</td>
<td>ACGIH BEI</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Acetone</td>
<td>Urine</td>
<td>End of shift at end of work-week</td>
<td>40 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

Hematoxylin B

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III)-chloride hexahydrate</td>
<td>10025-77-1</td>
<td>TWA</td>
<td>1 mg/m3 (Iron)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m3 (Iron)</td>
<td>OSHA P0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m3 (Iron)</td>
<td>NIOSH REL</td>
</tr>
</tbody>
</table>

Tartrazine Counterstain

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>TWA</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>STEL</td>
<td>15 ppm</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>
### Hazardous components without workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tartrazine</td>
<td>1934-21-0</td>
</tr>
</tbody>
</table>

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

In the case of vapor formation use a respirator with an approved filter.

#### Hand protection

- **Material**: Protective gloves
- **Remarks**: Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly.

#### Eye protection

- **Eye wash bottle with pure water**
- **Tightly fitting safety goggles**
- **Face shield and protective suit for abnormal processing problems.**

#### Skin and body protection

- **Impervious clothing**
- **Choose body protection according to the amount and concentration of the dangerous substance at the work place.**

#### Hygiene measures

- When using do not eat or drink.
- When using do not smoke.
- Wash hands before breaks and at the end of workday.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Mucicarmine Stain

- **Appearance**: liquid
- **Color**: red, opaque
- **Odor**: No data available
- **Odor Threshold**: No data available
- **pH**: 3.5 - 4.1
- **Melting point/range**: No data available
- **Boiling point/boiling range**: No data available
Flash point : does not flash
Evaporation rate : No data available
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapor pressure : No data available
Relative vapor density : No data available
Relative density : No data available
Density : 1.0033 g/cm³
Solubility(ies)
   Water solubility : completely miscible
   Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity
   Viscosity, dynamic : No data available
   Viscosity, kinematic : No data available

**Hematoxylin A**
Appearance : liquid
Color : yellow-orange
Odor : alcohol-like
Odor Threshold : No data available
pH : 5 - 7
Melting point/range : No data available
Boiling point/boiling range : 78 °C
Flash point : ca. 12.5 °C
Evaporation rate : No data available
Flammability (solid, gas) : Sustains combustion
### MUCICARMINE STAINING KIT

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>0.793 g/cm³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
</tbody>
</table>

### Hematoxylin B

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>1.65 - 2.0</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>does not flash</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.01 g/cm³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Tartrazine Counterstain</strong></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>slight, vinegar-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>acidic</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>does not flash</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>The product is not flammable.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Solubility(ies)
Water solubility: completely miscible
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Autoignition temperature: No data available
Decomposition temperature: Hazardous decomposition products formed under fire conditions.
Viscosity
Viscosity, dynamic: No data available
Viscosity, kinematic: No data available
Oxidizing properties: The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY
Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions:
Reacts with the following substances:
Acids
Bases
Oxidizing agents
Amines
Alcohol
Alkali metals
Metals
No decomposition if stored and applied as directed.
Vapors may form explosive mixture with air.
Conditions to avoid: Heat, flames and sparks.
Incompatible materials:
Combustible material
Oxidizing agents
Acids and bases
Metals
Amines
Alcohol
Alkali metals
Hazardous decomposition products:
Carbon oxides
Nitrogen oxides (NOx)
Sulfur oxides
Hydrogen chloride gas
SECTION 11. TOXICOLOGICAL INFORMATION

*Mucicarmine Stain*

**Acute toxicity**
Not classified based on available information.

**Ingredients:**

**Aluminiumchloride:**

Acute oral toxicity: LD50 Oral (Rat): 3,450 mg/kg
LD50 Oral (Mouse): 1,130 mg/kg

Acute dermal toxicity: LD50 Dermal (Rabbit): > 2,000 mg/kg

**Skin corrosion/irritation**
Causes skin irritation.

**Ingredients:**

**Aluminiumchloride:**
Result: Causes burns.

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**Ingredients:**

**Aluminiumchloride:**
Result: Risk of serious damage to eyes.

**Respiratory or skin sensitization**
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

**Germ cell mutagenicity**
Not classified based on available information.

**Carcinogenicity**
Not classified based on available information.

**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.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Hematoxylin A

Acute toxicity
Not classified based on available information.

Ingredients:

Ethanol:
Acute oral toxicity : LD50 Oral (Rat): 7,000 mg/kg
LD50 Oral (Mouse): 3,450 mg/kg
Acute inhalation toxicity : LC50 (Rat): 20000 ppm
Exposure time: 10 h
LC50 (Mouse): 39 g/m3
Exposure time: 4 h

Methanol:
Acute oral toxicity : LD50 Oral (Mouse): 7,300 mg/kg
LD50 Oral (Rat): 5,628 mg/kg
Acute inhalation toxicity : LC50 (Rat): 85.26 mg/l
Exposure time: 4 h
LC50 (Rat): 64000 ppm
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): 15,800 mg/kg

propan-2-ol:
Acute oral toxicity : LD50 Oral (Rat): 4,570 mg/kg
LD50 Oral (Mouse): 3,600 mg/kg
LD50 Oral (Rabbit): 6,410 mg/kg
Acute inhalation toxicity : LC50 (Rat): 30 mg/l, 16000 ppm
Exposure time: 4 h
LC50 (Mouse): 53 mg/l

Acute dermal toxicity : LD50 Dermal (Rabbit): 13,400 mg/kg

Hematoxylin cryst.:
Acute oral toxicity : LD50 Oral (Rat): 400 mg/kg
Skin corrosion/irritation
Not classified based on available information.

**Ingredients:**

**Methanol:**
Remarks: The product may be absorbed through the skin. May irritate skin.

**propan-2-ol:**
Remarks: May cause skin irritation in susceptible persons.

**Hematoxylin cryst.:**
Result: Irritating to skin.
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Not classified based on available information.

**Ingredients:**

**Methanol:**
Remarks: Contact with eyes may cause irritation.

**propan-2-ol:**
Result: Irritating to eyes.
Remarks: May cause irreversible eye damage.

**Hematoxylin cryst.:**
Result: Irritating to eyes.
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

**Ingredients:**

**Methanol:**
Species: Guinea pig
Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity
Not classified based on available information.

**Ingredients:**

**Methanol:**
Genotoxicity in vitro: Test Type: Ames test
Result: negative
Genotoxicity in vivo: Result: negative

Carcinogenicity
May cause cancer.

**IARC**
Group 1: Carcinogenic to humans

Ethanol 64-17-5
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

Causes damage to organs (Eyes).

Ingredients:

Methanol:
Target Organs: Eyes
Assessment: Causes damage to organs.

propan-2-ol:
Assessment: May cause drowsiness or dizziness.

Hematoxylin cryst.:
Routes of exposure: Inhalation
Assessment: May cause respiratory irritation.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Methanol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

propan-2-ol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Hematoxylin cryst.:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Not classified based on available information.

Ingredients:

Methanol:
No aspiration toxicity classification

Further information

Product:
Remarks: Solvents may degrease the skin.
Hematoxylin B

Acute toxicity
Not classified based on available information.

Ingredients:
Iron(III)-chloride hexahydrate:
Acute oral toxicity: LD50 Oral (Rat): 316 mg/kg

Skin corrosion/irritation
Causes severe burns.

Ingredients:
Iron(III)-chloride hexahydrate:
Species: Rabbit
Result: Irritating to skin.
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Causes serious eye damage.

Ingredients:
Iron(III)-chloride hexahydrate:
Species: Rabbit
Result: Risk of serious damage to eyes.
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization
Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Ingredients:
Iron(III)-chloride hexahydrate:
Germ cell mutagenicity - Assessment: Not mutagenic in Ames Test.

Carcinogenicity
Not classified based on available information.

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.

**Ingredients:**
**Iron(III)-chloride hexahydrate:**
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT-repeated exposure**
Not classified based on available information.

**Ingredients:**
**Iron(III)-chloride hexahydrate:**
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity
Not classified based on available information.

**Tartrazine Counterstain**

**Acute toxicity**
Not classified based on available information.

**Ingredients:**
**Acetic acid:**
Acute oral toxicity : LD50 Oral (Rat): 3,310 mg/kg
Acute inhalation toxicity : LC50 (Mouse): 5620 ppm
Exposure time: 1 h
Acute dermal toxicity : LD50 Dermal (Rabbit): 1,115 mg/kg

**Tartrazine:**
Acute oral toxicity : LD50 Oral (Rat): 12,750 mg/kg

**Skin corrosion/irritation**
Not classified based on available information.

**Ingredients:**
**Acetic acid:**
Result: Causes severe burns.

**Tartrazine:**
Remarks: May cause skin irritation and/or dermatitis.

**Serious eye damage/eye irritation**
Not classified based on available information.

**Ingredients:**
**Tartrazine:**
Remarks: Product dust may be irritating to eyes, skin and respiratory system.

**Respiratory or skin sensitization**
Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Ingredients:**

**Tartrazine:**
Assessment: May cause sensitization by skin contact.
Remarks: Causes sensitization.

Assessment: May cause sensitization by inhalation.
Remarks: Causes sensitization.

**Germ cell mutagenicity**
Not classified based on available information.

**Ingredients:**

**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 in Ames Test.

**Carcinogenicity**
Not classified based on available information.

**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.
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT-repeated exposure**
Not classified based on available information.

**Ingredients:**
Tartrazine:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration toxicity**
Not classified based on available information.

**Ingredients:**
Tartrazine: No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

*Mucicarmine Stain*

**Ecotoxicity**

**Ingredients:**

**Aluminiumchloride:**
- Toxicity to fish: LC50 (Gambusia affinis (Mosquito fish)): 27.1 mg/l Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 27.3 mg/l Exposure time: 48 h

Ecotoxicology Assessment
- Toxicity Data on Soil: Not expected to adsorb on soil.
- Other organisms relevant to the environment: No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**

**Ingredients:**

**Aluminiumchloride:**
- Partition coefficient: n-octanol/water: Remarks: No data available

**Mobility in soil**
No data available
Other adverse effects

**Hematoxylin A**

**Ecotoxicity**

**Ingredients:**

**Ethanol:**
- Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): 8,000 mg/l
  Exposure time: 48 h
- LC50 (Oncorhynchus mykiss (rainbow trout)): 7,100 mg/l
  Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 5,400 mg/l
  Exposure time: 48 h
- Toxicity to algae: EC0 (Scenedesmus quadricauda (Green algae)): 5,000 mg/l
  Exposure time: 7 d
- Toxicity to bacteria: EC0 (Pseudomonas putida): 6,500 mg/l
  Exposure time: 16 h

**Ecotoxicology Assessment**

Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

**Methanol:**
- Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l
  Exposure time: 96 h
- LC50 (Oncorhynchus mykiss (rainbow trout)): 8,000 mg/l
  Exposure time: 48 h
- LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 6,100 mg/l
  Exposure time: 48 h
- Toxicity to algae: EC0 (Scenedesmus quadricauda (Green algae)): 8,000 mg/l
  Exposure time: 7 d
- Toxicity to bacteria: LC0 (Pseudomonas putida): 6,600 mg/l
  Exposure time: 16 h

**Ecotoxicology Assessment**

Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

**propan-2-ol:**
- Toxicity to fish: LC0 (Oncorhynchus mykiss (rainbow trout)): 10,000 mg/l
  Method: OECD Test Guideline 203
LC50 (Oncorhynchus mykiss (rainbow trout)): 12,250 mg/l
   Method: OECD Test Guideline 203

LC100 (Oncorhynchus mykiss (rainbow trout)): 15,000 mg/l
   Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
   EC50 (Daphnia magna (Water flea)): 9,500 mg/l
   Exposure time: 24 h

Toxicity to algae:
   EC0 (Scenedesmus quadricauda (Green algae)): 1,800 mg/l
   Exposure time: 168 h
   Method: OECD Test Guideline 201

Toxicity to bacteria:
   EC0 (Pseudomonas putida): 1,050 mg/l
   Exposure time: 16 h

Ecotoxicology Assessment:
Toxicity Data on Soil:
   Not expected to adsorb on soil.

Other organisms relevant to the environment:
   No data available

Hematoxylin cryst.:
Ecotoxicology Assessment:
Toxicity Data on Soil:
   Not expected to adsorb on soil.

Other organisms relevant to the environment:
   No data available

Perspective and degradability

Ingredients:

Methanol:
   Biodegradability:
      Result: Readily biodegradable.
      Biodegradation: 99 %
      Exposure time: 30 d
      Method: OECD Test Guideline 301

Biochemical Oxygen Demand (BOD):
   Biochemical oxygen demand
   600 - 1,120 mg/g
   Incubation time: 5 d

Chemical Oxygen Demand (COD):
   1,420 mg/g

ThOD:
   1,500 mg/g

BOD/ThOD:
   76 %

propan-2-ol:
   Biodegradability:
      Biodegradation: 99 %
      Exposure time: 11 d
      Method: OECD Test Guideline 302

      Biodegradation: 57 %
Bioaccumulative potential

**Ingredients:**

**Ethanol:**
Partition coefficient: n-octanol/water: Remarks: No data available

**Methanol:**
Bioaccumulation: Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water: log Pow: -0.7

**propan-2-ol:**
Partition coefficient: n-octanol/water: log Pow: 0.05

**Hematoxylin cryst.:**
Partition coefficient: n-octanol/water: Remarks: No data available

**Mobility in soil**
No data available

**Other adverse effects**

**Hematoxylin B**

**Ecotoxicity**

**Ingredients:**

**Iron(III)-chloride hexahydrate:**
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 22 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 9.6 mg/l Exposure time: 48 h

Ecotoxicology Assessment
Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**

**Ingredients:**

Iron(III)-chloride hexahydrate: Partition coefficient: n-octanol/water: log Pow: -4 (24 °C)
octanol/water  

Mobility in soil  
No data available  

Other adverse effects  

**Tartrazine Counterstain**

Ecotoxicity

**Ingredients:**

**Acetic acid:**
Toxicity to fish:

- **LC50 (Leuciscus idus (Golden orfe)):** 410 mg/l  
  Exposure time: 48 h

- **NOEC (Oncorhynchus mykiss (rainbow trout)):** 1,000 mg/l  
  Exposure time: 96 h  
  Method: OECD Test Guideline 203

- **LC50 (Oncorhynchus mykiss (rainbow trout)):** 160 mg/l  
  Exposure time: 48 h  
  Method: OECD Test Guideline 203

- **LC100 (Oncorhynchus mykiss (rainbow trout)):** 500 mg/l  
  Exposure time: 48 h

- **LC0 (Oncorhynchus mykiss (rainbow trout)):** 50 mg/l  
  Exposure time: 48 h

- **LC50 (Lepomis macrochirus (Bluegill sunfish)):** 75 mg/l  
  Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

- **EC50 (Daphnia magna (Water flea)):** 95 mg/l  
  Exposure time: 24 h

- **EC50 (Daphnia magna (Water flea)):** > 1,000 mg/l  
  Exposure time: 48 h  
  Method: OECD Test Guideline 202

**Tartrazine:**

Toxicity to daphnia and other aquatic invertebrates:

- **EC50 (Daphnia magna (Water flea)):** 5,706.55 mg/l  
  Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity:

- This product has no known ecotoxicological effects.

Chronic aquatic toxicity:

- This product has no known ecotoxicological effects.

Toxicity Data on Soil:

- Not expected to adsorb on soil.

Other organisms relevant to the environment:

- No data available
Persistence and degradability

**Ingredients:**

**Acetic acid:**
- Biodegradability: Zahn-Wellens Test
  - Concentration: 1,250 mg/l
  - Result: Readily biodegradable.
  - Biodegradation: 99%
  - Exposure time: 5 d
  - Method: OECD Test Guideline 302B

Zahn-Wellens Test
- Concentration: 1,250 mg/l
- Result: Readily biodegradable.
- Biodegradation: 91%
- Exposure time: 1 d
- Method: OECD Test Guideline 302B

Result: Readily biodegradable.
- Biodegradation: 71%
- Exposure time: 5 d

Bioaccumulative potential

**Ingredients:**

**Acetic acid:**
- Partition coefficient: n-octanol/water: log Pow: -0.31

**Tartrazine:**
- Partition coefficient: n-octanol/water: Remarks: No data available

Mobility in soil
- No data available

Other adverse effects

**Ingredients:**

**Tartrazine:**
- Adsorbed organic bound halogens (AOX): Remarks: Not applicable

Additional ecological information: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
- Waste from residues: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging:
- Empty remaining contents.
- Dispose of as unused product.
- Do not re-use empty containers.
- Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
- UN number: UN 3316
- Class: 9
- Packing group: II
- Labels: 9

IATA-DGR
- UN/ID No.: UN 3316
- Proper shipping name: Chemical kits
- Class: 9
- Packing group: II
- Labels:
- Packing instruction (cargo aircraft): 960
- Packing instruction (passenger aircraft): 960

IMDG-Code
- UN number: UN 3316
- Proper shipping name:
- Class: 9
- Packing group: II
- Labels: 9
- EmS Code: F-A, S-P
- Marine pollutant: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not applicable

Domestic regulation

49 CFR
- UN/ID/NA number: UN 3316
- Proper shipping name: CHEMICAL KITS
- Class: 9
- Packing group: II
- Labels: Class 9 - Miscellaneous Dangerous Goods
- ERG Code: 171
- Marine pollutant: no
SECTION 15. REGULATORY INFORMATION

Mucicarmine Stain

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminiumchloride</td>
<td>7446-70-0</td>
<td>100</td>
<td>5000</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 : 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.

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMIs Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know
Aluminiumchloride 7446-70-0 1 - 5 %

Pennsylvania Right To Know
Water 7732-18-5 90 - 100 %
Aluminiumchloride 7446-70-0 1 - 5 %

New Jersey Right To Know
Water 7732-18-5 90 - 100 %
Aluminiumchloride 7446-70-0 1 - 5 %
Carmine 1390-65-4 1 - 5 %
California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH INV</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>TSCA</td>
<td>Not On TSCA Inventory Carmine</td>
</tr>
<tr>
<td>DSL</td>
<td>All components of this product are on the Canadian DSL</td>
</tr>
<tr>
<td>AICS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>NZIoC</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not in compliance with the inventory Water Carmine</td>
</tr>
<tr>
<td>ISHL</td>
<td>Not in compliance with the inventory Carmine</td>
</tr>
<tr>
<td>KECI</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>PICCS</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>IECSC</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
</tbody>
</table>

TSCA list
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Hematoxylin A

EPCRA - Emergency Planning and Community Right-to-Know

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards
<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Hazard</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
</tr>
<tr>
<td>Acute Health Hazard</td>
</tr>
</tbody>
</table>

SARA 302
<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

MUCICARMINE STAINING KIT

SAFETY DATA SHEET

Version 1.2
Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-24-2015

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

- Methanol 67-56-1 4.94%
- propan-2-ol 67-63-0 4.94%

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

- Methanol 67-56-1 4.94%
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

- Ethanol 64-17-5 88.92%
- Methanol 67-56-1 4.94%
- propan-2-ol 67-63-0 4.94%

Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know
- Ethanol 64-17-5 70 - 90 %
- Methanol 67-56-1 1 - 5 %
- propan-2-ol 67-63-0 1 - 5 %

Pennsylvania Right To Know
- Ethanol 64-17-5 70 - 90 %
- Methanol 67-56-1 1 - 5 %
- propan-2-ol 67-63-0 1 - 5 %

New Jersey Right To Know
- Ethanol 64-17-5 70 - 90 %
- Methanol 67-56-1 1 - 5 %
- propan-2-ol 67-63-0 1 - 5 %
- Hematoxylin cryst. 517-28-2 1 - 5 %

California Prop. 65
WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

- Methanol 67-56-1

The ingredients of this product are reported in the following inventories:

- CH INV: On the inventory, or in compliance with the inventory
- TSCA: On TSCA Inventory
SAFETY DATA SHEET

MUCICARMINE STAINING KIT

Version: 1.2
Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-24-2015

DSL: All components of this product are on the Canadian DSL
AICS: On the inventory, or in compliance with the inventory
NZIoC: On the inventory, or in compliance with the inventory
ENCS: On the inventory, or in compliance with the inventory
ISHL: On the inventory, or in compliance with the inventory
KECI: On the inventory, or in compliance with the inventory
PICCS: On the inventory, or in compliance with the inventory
IECSC: On the inventory, or in compliance with the inventory

TSCA list
No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

Hematoxylin B

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III)-chloride hexahydrate</td>
<td>10025-77-1</td>
<td>1000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards: Acute Health Hazard

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

SARA 313: 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.

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).
Clean Water Act
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Iron(III)-chloride hexahydrate 10025-77-1 1.16 %
Hydrochloric acid (theor. 100%) 7647-01-0 0.38 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Iron(III)-chloride hexahydrate 10025-77-1 1.16 %
Hydrochloric acid (theor. 100%) 7647-01-0 0.38 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know
Iron(III)-chloride hexahydrate 10025-77-1 1 - 5 %
Hydrochloric acid (theor. 100%) 7647-01-0 0.1 - 1 %

Pennsylvania Right To Know
Water 7732-18-5 90 - 100 %
Iron(III)-chloride hexahydrate 10025-77-1 1 - 5 %
Hydrochloric acid (theor. 100%) 7647-01-0 0.1 - 1 %

New Jersey Right To Know
Water 7732-18-5 90 - 100 %
Iron(III)-chloride hexahydrate 10025-77-1 1 - 5 %

California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

CH INV : On the inventory, or in compliance with the inventory
TSCA : On TSCA Inventory
DSL : All components of this product are on the Canadian DSL
AICS : On the inventory, or in compliance with the inventory
NZIoC : On the inventory, or in compliance with the inventory
ENCS : Not in compliance with the inventory
Water
ISHL : On the inventory, or in compliance with the inventory
KECI : On the inventory, or in compliance with the inventory
PICCS : On the inventory, or in compliance with the inventory
IECSC : On the inventory, or in compliance with the inventory
TSCA list
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Tartrazine Counterstain**

**EPCRA - Emergency Planning and Community Right-to-Know**

**CERCLA Reportable Quantity**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Component RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**
This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards**
No SARA Hazards

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

**SARA 313**
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.

**Clean Air Act**
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

| Acetic acid | 64-19-7 | 0.25 % |

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| Acetic acid | 64-19-7 | 0.25 % |

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations**

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

**Pennsylvania Right To Know**
SAFETY DATA SHEET

MUCICARMINE STAINING KIT

Version 1.2
Revision Date: 12-16-2015
Date of last issue: 12-14-2015
Date of first issue: 11-24-2015

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>90 - 100 %</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>0.1 - 1 %</td>
</tr>
</tbody>
</table>

New Jersey Right To Know

Water

California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

CH INV: On the inventory, or in compliance with the inventory
TSCA: On TSCA Inventory
DSL: All components of this product are on the Canadian DSL
AICS: On the inventory, or in compliance with the inventory
NZIoC: Not in compliance with the inventory
Acetic acid

ENCS: Not in compliance with the inventory
Water

ISHL: On the inventory, or in compliance with the inventory
KECI: On the inventory, or in compliance with the inventory
PICCS: On the inventory, or in compliance with the inventory
IECSC: On the inventory, or in compliance with the inventory

TSCA list
No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

Mucicarmine Stain

GHS Label element
Hazard pictograms

Signal Word: Warning
Hazard Statements: H315 Causes skin irritation.
H319 Causes serious eye irritation.
Precautionary Statements: Prevention:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 IF skin irritation occurs: Get medical advice/attention.
P337 + P313 IF eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.

**Hematoxylin A**

**GHS Label element**

Hazard pictograms:

- Flame
- Person

**Signal Word**

: Danger

**Hazard Statements**

: H225 Highly flammable liquid and vapor.
H350 May cause cancer.
H370 Causes damage to organs (Eyes).

**Precautionary Statements**

: Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P307 + P311 IF exposed: Call a POISON CENTER or doctor/physician.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

**Disposal:**
P501 Dispose of contents/container to an approved waste disposal plant.
SAFETY DATA SHEET

MUCICARMINE STAINING KIT

Version 1.2  Revision Date: 12-16-2015  Date of last issue: 12-14-2015

Date of first issue: 11-24-2015

Hematoxylin B

GHS Label element

Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
                   H314 Causes severe skin burns and eye damage.

Precautionary Statements : Prevention:
P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage:
P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

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

Tartrazine Counterstain

GHS Label element

Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
                   H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements : Prevention:
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P285 In case of inadequate ventilation wear respiratory protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.

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

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Half maximal inhibitory concentration; ICAO - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods
Further information

**Mucicarmine Stain**

**NFPA:**

- **Flammability:**
  - Health: 0
  - Instability: 0

**HMIS III:**

- **HEALTH:** 3
- **FLAMMABILITY:** 1
- **PHYSICAL HAZARD:** 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Special hazard.

**Hematoxylin A**

**NFPA:**

- **Flammability:**
  - Health: 3
  - Instability: 0

**HMIS III:**

- **HEALTH:** 0*
- **FLAMMABILITY:** 3
- **PHYSICAL HAZARD:** 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Special hazard.

**Hematoxylin B**

**NFPA:**

- **Flammability:**
  - Health: 0
  - Instability: 0

**HMIS III:**

- **HEALTH:** 3
- **FLAMMABILITY:** 1
- **PHYSICAL HAZARD:** 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Special hazard.

**Tartrazine Counterstain**
The information provided in this Material 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.

US / Z8