Safety Data Sheet
Modified Mayer's Hematoxylin

Section 1 - Chemical Product and Company Identification

SDS Name: Modified Mayer's Hematoxylin
Catalog Numbers: SO-718
Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923
For information, call: 978-739-4883
Emergency Number: 800-424-9300
For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H302-Acute toxicity, oral: 4
H315-Skin corrosion/irritation: 2
H319-Serious eye damage/eye irritation: 2A
H350-Carcinogenicity: 1B

5% of the mixture consists of ingredients of unknown acute oral toxicity.
13.03% of the mixture consists of ingredients of unknown acute inhalation toxicity.

Pictograms or Hazard symbols and Hazard statement(s):

Signal Word: Danger

Hazard Statements:

H302-Harmful if swallowed
H315-Causes skin irritation
H319-Causes serious eye irritation
H350-May cause cancer

Precautionary Statements:

P201-Obtain special instructions before use.
P202-Do not handle until all safety precautions have been read and understood.
P264-Wash thoroughly after handling.
P270-Do not eat, drink, or smoke when using this product.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312-If swallowed: Call a Poison Center/doctor if you feel unwell.
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.
P308+P313-If exposed or concerned: Get medical advice/attention.
P330-Rinse mouth.
P332+P313-If skin irritation occurs: Get medical advice/attention.
P337+P313-If eye irritation persists: Get medical advice/attention.
P362+P364-Take off contaminated clothing and wash it before reuse.
P405-Store locked up.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS #	Chemical Name	Percent
7784-26-1	Ammonium Aluminum Sulfate Dodecahydrate	5 w/v
302-17-0	Chloral Hydrate	7.5 w/v
517-28-2	Hematoxylin	0.4 w/w
5949-29-1	Citric Acid Monohydrate	0.1 w/v
7681-55-2	Sodium Iodate	0.03 w/v
7732-18-5	Water	Balance

Section 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. Seek medical attention.

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

Oral Exposure: If swallowed, seek immediate medical advice. Do not induce vomiting. Rinse mouth with water and drink small quantities of water (stop if the exposed person feels sick as vomiting may be dangerous).

Inhalation Exposure: If inhaled, remove to fresh air. If breathing becomes difficult, get immediate medical attention.

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. During a fire, irritating gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, nitrogen oxides, sulfur oxides, aluminum oxides, sodium oxides, hydrogen iodide gas, hydrogen chloride gas, phosphene gas, irritating and toxic fumes and gases.

Flash Point: Not available
Autoignition Temperature: Not available
Explosion Limits, Lower: Not available
Upper: Not available
NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):
Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to drains. Do not release to the environment.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Store in a tightly closed container in a cool, dry, and well-ventilated area. **Light sensitive**. Keep away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
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: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA – PEL
Aluminum Ammonium Sulfate Dodecahydrate CAS#7784-26-1	Not listed	2 mg/m3 TWA	2 mg/m3 TWA (vacated)
Chloral Hydrate CAS#302-17-0	Not listed	Not listed	Not listed
Hematoxylin CAS#517-28-2	Not listed	Not listed	Not listed
Citric Acid Monohydrate CAS#5949-29-1	Not listed	Not listed	Not listed
Sodium Iodate CAS#7681-55-2	Not listed	Not listed	Not listed

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Dark brown-purple
Odor: Odorless
Vapor Pressure: Not available
Odor Threshold: Not available
Vapor Density: Not available
pH: Not available
Relative Density: Not available
Melting point/freezing point: Not available
Solubility: Soluble in water
Boiling Point: Not available
Flash Point: Not available
Evaporation Rate: Not available
Flammability (solid, gas): Not available
Partition coefficient: n-octanol/water: Not available
Autoignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under ordinary conditions of use and storage. Light sensitive.
Conditions to Avoid: Incompatible materials, excess heat, and freezing.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, reducing

agents, alcohols, sulfides, peroxides, metals, finely powdered metals, iron/iron-containing compounds, various plastics, and combustible material.
Hazardous Decomposition Products: Carbon oxides, nitrogen oxides, sulfur oxides, aluminum oxides, sodium oxides, hydrogen iodide gas, hydrogen chloride gas, phosphene gas, irritating and toxic fumes and gases.

Section 11 - Toxicological Information

CAS#7784-26-1 Ammonium Aluminum Sulfate Dodecahydrate:
LD50 Oral: Not available
LD50 Dermal: >2000 mg/kg (rat)
LC50 Inhalation: Not available

Carcinogenicity: Ammonium Aluminum Sulfate Dodecahydrate CAS#7784-26-1 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

CAS#302-17-0 Chloral Hydrate: RTECS#: FM8750000
LD50 Oral: 479 mg/kg (rat)
LD50 Oral Estimate: 100.1 mg/kg (expert judgement)
LD50 Dermal: 3,030 mg/kg (rat)
LC50 Inhalation: Not available

Carcinogenicity: Chloral Hydrate CAS#302-17-0 is not listed by NTP, ACGIH, or OSHA. Chloral Hydrate is listed by IARC (Group 2A, Probably Carcinogenic to Humans) and California Prop. 65 as a carcinogen.

CAS#517-28-2 Hematoxylin: RTECS#: MH7875000
LD50 Oral: >2000 mg/kg (rat)
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Hematoxylin CAS# 517-28-2 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

CAS#5949-29-1 Citric Acid Monohydrate: RTECS#: GE7810000
LD50 Oral: 5.79 g/kg (mouse)
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Citric Acid Monohydrate CAS#5949-29-1 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

CAS#7681-55-2 Sodium Iodate: RTECS#: NN1400000
LD50 Oral: 505 mg/kg (mouse)
LD50 Dermal: Not available
LC50 Inhalation: Not available

Carcinogenicity: Sodium iodate CAS#7681-55-2 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.
Teratogenicity: Not available.
Reproductive Effects: Not available.
Developmental Effects: Not available.
Neurotoxicity: Not available.
Mutagenicity: Not available.
Specific Target Organ Toxicity, Single Exposure: Not available.
Specific Target Organ Toxicity, Repeated Exposure: Not available.

Symptoms associated with exposure: Causes skin irritation. Causes serious eye irritation. Eye exposure may cause watering, redness, pain, or serious irritation. Skin exposure may cause irritation, redness, dermatitis. Overexposure may cause stomach irregularities, cough, shortness of breath, headache, nausea, vomiting, diarrhea, drowsiness, confusion. May cause cancer. Tumorigenic effects have been reported in experimental animal studies (hematoxylin).

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains.

CAS#302-17-0 Chloral Hydrate:
LC50, freshwater fish: 1,720 mg/L 48h (leuciscus idus)(golden orfe)
EC50, water flea: 500 mg/L 48h (daphnia magna)

CAS#517-28-2 Hematoxylin:
LC50, freshwater fish: >35 mg/L 96h (oncorhynchus mykiss)(rainbow trout)
EC50, freshwater algae: >100 mg/L 7d (lemna minor)
EC50, water flea: ca. 29.7 mg/L 48h (daphnia magna)

CAS#7681-55-2 Sodium Iodate:
LC50, freshwater fish: 220 mg/L 96h (oncorhynchus mykiss)(rainbow trout)

Persistence and degradability: Not available.
Bio-accumulative potential: Not available.
Mobility: Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT
Non-Regulated

Section 15 - Regulatory Information

Canada Regulatory Information

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

Section 16 - Additional Information

SDS Creation Date: 10/21/12
Revision #1: 2/24/14 YM
Revision #2: 6/22/17
Revision #3: 5-6-22
Revision #4: 6-21-23

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