Thermo SCIENTIFIC

Print Date: 11/12/08
Revision Date: 11/12/2008
Version: 1

Material Safety Data Sheet
Chromaview Alcoholic Hematoxylin

Section 1 - Chemical Product and Company Identification

MSDS Name:

Chromaview Alcoholic Hematoxylin

Catalog Numbers:

22110649, 88007

Synonyms:

None Known.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
64-17-5	Ethyl alcohol	85-86	200-578-6	F	11
67-56-1	Methyl alcohol	4-5	200-659-6	F T	11 23/24/25 39/23/24/25
67-63-0	Isopropyl alcohol	4-5	200-661-7	F XI	11 36 67
517-28-2	Hematoxylin	4-5	208-237-3		

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Purple liquid
Danger! Poison! Causes severe eye irritation. Causes respiratory tract irritation. Flammable liquid and vapor. May be fatal or cause blindness if swallowed. Vapor harmful. This substance has caused adverse reproductive and fetal effects in humans. May be absorbed through intact skin. May form explosive peroxides. May cause central nervous system depression. May cause liver, kidney and heart damage. Cannot be made non-poisonous. Causes moderate skin irritation. Flash Point: 13.9°C.
Target Organs: Kidneys, Central nervous system, Liver, Eyes

Potential Health Effects

Eye:

Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Skin:

Causes moderate skin irritation. May be absorbed through the skin. May cause cyanosis of the extremities.

Ingestion:

May be fatal or cause blindness if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. 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.

Inhalation:

Causes respiratory tract irritation. May cause visual impairment and possible permanent blindness. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.

Chronic:

Prolonged or repeated skin contact may cause defatting and dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

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:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

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.

Notes to Physician:

Effects may be delayed. Ethanol may inhibit methanol metabolism. Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous sytem diseases may be at increased risk from exposure to this substance.

Antidote:

Ethanol may inhibit methanol metabolism.

Section 5 - Fire Fighting Measures

General Information:

Ethanol may inhibit methanol metabolism. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Will be easily ignited by heat, sparks or flame.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: 3.3% Upper: 19.0%

Flash Point:

13.9°C (57.02°F)

NFPA Rating:

(estimated) Health: 2; Flammability: 3; Instability: 0

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. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

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. Use only under a chemical fume hood.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Ethyl alcohol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH (10% LEL)	1000 ppm TWA; 1900 mg/m3 TWA;
Methyl alcohol	200 ppm TWA;250 ppm STEL;Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA;
Isopropyl alcohol	200 ppm TWA;400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH (10% LEL)	400 ppm TWA; 980 mg/m3 TWA;
Hematoxylin	None listed	None listed	None listed

OSHA Vacated PELs

Ethyl alcohol: 1000 ppm TWA; 1900 mg/m3 TWA
Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA
Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

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 respirator use.

Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Purple
Odor:	No information found
pH:	No information found
Vapor Pressure:	44 mm Hg
Vapor Density:	1.6
Evaporation Rate:	3.2 (Butyl acetate=1)
Viscosity:	No information found
Boiling Point:	77.0 - 80.0°C
Freezing/Melting Point:	No information found
Decomposition Temperature:	No information found
Solubility in water:	Soluble.
Specific Gravity/Density:	0.790 @ 21°C
Molecular Formula:	Solution
Molecular Weight:	No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stability unknown. This material may be sensitive to peroxide formation.

Conditions to Avoid:

Ignition sources, excess heat

Incompatibilities with Other Materials

Strong oxidizing agents, strong acids, acid chlorides, active metals, alkali metals, aluminum, ammonia, halogens, hydrazine, nitric acid, peroxides, isocyanates, aliphatic amines, sodium, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), acid anhydrides, calcium hypochlorite, cyanuric chloride, chromyl chloride, nitrosyl perchlorate, diethyl zinc, bromine pentafluoride, perchloric acid, silver nitrate, chromic anhydride, mercuric nitrate, phosphorus trioxide, potassium tert-butoxide, magnesium perchlorate, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, Oxidants (such as barium perchlorate, bromine, chlorine, hydrogen peroxide, lead perchlorate, perchloric acid, sodium hypochlorite)., acetyl bromide, alkyl aluminum salts, beryllium dihydride, Attacks some forms of plastics, rubbers, and coatings., acetyl chloride, disulfur dichloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 64-17-5: KQ6300000
CAS# 67-56-1: PC1400000
CAS# 67-63-0: NT8050000
CAS# 517-28-2: MH7875000

LD50/LC50:

CAS# 64-17-5:
Draize test, rabbit, eye: 500 mg Severe
Draize test, rabbit, eye: 500 mg/24H Mild
Draize test, rabbit, skin: 20 mg/24H Moderate
Inhalation, mouse: LC50 = 39 gm/m3/4H
Inhalation, rat: LC50 = 20000 ppm/10H
Oral, mouse: LD50 = 3450 mg/kg
Oral, rabbit: LD50 = 6300 mg/kg
Oral, rat: LD50 = 7060 mg/kg
Oral, rat: LD50 = 9000 mg/kg.

CAS# 67-56-1:
Draize test, rabbit, eye: 40 mg Moderate
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 20 mg/24H Moderate
Inhalation, rabbit: LC50 = 81000 mg/m3/14H
Inhalation, rat: LC50 = 64000 ppm/4H
Oral, mouse: LD50 = 7300 mg/kg
Oral, rabbit: LD50 = 14200 mg/kg
Oral, rat: LD50 = 5600 mg/kg
Skin, rabbit: LD50 = 15800 mg/kg.

CAS# 67-63-0:
Draize test, rabbit, eye: 100 mg Severe
Draize test, rabbit, eye: 10 mg Moderate
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 500 mg Mild
Inhalation, mouse: LC50 = 53000 mg/m3
Inhalation, rat: LC50 = 16000 ppm/8H
Inhalation, rat: LC50 = 72600 mg/m3
Oral, mouse: LD50 = 3600 mg/kg
Oral, mouse: LD50 = 3600 mg/kg
Oral, rabbit: LD50 = 6410 mg/kg
Oral, rat: LD50 = 5045 mg/kg
Oral, rat: LD50 = 5000 mg/kg
Skin, rabbit: LD50 = 12800 mg/kg.

CAS# 517-28-2:
No information found

Carcinogenicity:

CAS# 64-17-5
ACGIH: Not listed
California: Not listed
NTP: Not listed
IARC: Group 1 carcinogen

CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-63-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 517-28-2: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

Methanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Specific developmental abnormalities include cardiovascular, musculoskeletal, and urogenital systems.Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals.Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome".Methanol and phenol have been shown to produce fetoxicity in the embryo or fetus in laboratory animals. Specific developmental abnormalities for methanol include the musculoskeletal, urogenital. and cardiovascular systems.

Teratogenicity:

CAS# 64-17-5: Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.

Reproductive:

CAS# 64-17-5: Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre-mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).

Mutagenicity:

CAS# 64-17-5: DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 pph/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).

Neurotoxicity:

No information found

Other:

Standard Draize Test(Skin, rabbit) = 20 mg/24H (Moderate) Standard Draize Test: Administration into the eye (rabbit) = 500 mg (Severe). The hazards associated with methanol may be seen in this product.

Section 12 - Ecological Information

Ecotoxicity:

Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C
Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified)
Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test

CAS# 64-17-5: When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

Environmental:

CAS# 64-17-5: When released to the atmosphere it will photodegrade in hours
(polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

Physical:

No information found

Other:

No information found

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 Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canadian TDG
Proper Shipping Name:	ETHANOL SOLUTIONS	ETHANOL SOLUTIONS
Hazard Class:	3	3
UN Number:	UN1170	UN1170
Packing Group:	II	II

USA RQ: CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 64-17-5 is listed on the TSCA Inventory.
CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 67-63-0 is listed on the TSCA Inventory.
CAS# 517-28-2 is listed on the TSCA Inventory.

Health and Safety Reporting List

CAS# 67-63-0: Effective 12/15/86, Sunset 12/15/96

Chemical Test Rules

CAS# 67-63-0: 40 CFR 799.2325

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# 67-56-1: 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# 64-17-5: immediate, delayed, fire.
CAS# 67-56-1: immediate, fire.
CAS# 67-63-0: immediate, delayed, fire.

SARA Section 313

This material contains Methyl alcohol (CAS# 67-56-1, 4-5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.
This material contains Isopropyl alcohol (CAS# 67-63-0, 4-5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

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

None of the components are on this list.

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

Ethyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
Isopropyl alcohol 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.
None of the components are on this list.
None of the components are on this list.
None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: F XN
Risk Phrases: R 11 Highly flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 68/20/21/22 Harmful : possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
Safety Phrases: S 7 Keep container tightly closed.
S 16 Keep away from sources of ignition - No smoking.
S 24/25 Avoid contact with skin and eyes.
S 36/37 Wear suitable protective clothing and gloves.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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# 64-17-5 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 67-63-0 is listed on Canada's DSL List.
CAS# 517-28-2 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of B2, D1B, D2A, D2B.
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# 64-17-5 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

No information found
MSDS Creation Date: November 12, 2008
Revision Date: November 12, 2008

Revisions were made in Sections:

9, 14

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.