SAFETY DATA SHEET
Rapid Fluorescent Decolorizer/ Counterstain

Printed: 03/15/2025
Revision: 03/21/2025
Supersedes Revision: 12/29/2016

This SDS complies with the US OSHA HCS 2012.

1. Product and Company Identification

Product Code: 0003570.02

Product Name: Rapid Fluorescent Decolorizer/ Counterstain

Company Name: CalibreScientific US, Inc.
1311 SE Cardinal Ct Suite 170
Vancouver, WA 98683

Phone Number:
1 (360)260-2779

Web site address: Alphatecsystems.com

Email address: Regulatory@calibrescientific.com

Emergency Contact: INFOTRAC
International 00-1- (352)323-3500
Information: North America 1 (800)535-5053

Intended Use: For Laboratory Use Only

Product List N/A Single Product Code.

2. Hazards Identification

Flammable Liquids, Category 2
Acute Toxicity: Inhalation, Category 4
Specific Target Organ Toxicity (single exposure), Category 1
Skin Corrosion/Irritation, Category 3

GHS Signal Word: **Danger**

GHS Hazard Phrases:
H225 - Highly flammable liquid and vapor.
H316 - Causes mild skin irritation.
H332 - Harmful if inhaled.
H370 - Causes damage to organs

GHS Precautionary Phrases:
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+311 - If exposed of concerned: Call a POISON CENTER/Doctor/...
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P332+313 - If skin irritation occurs, get medical advice/attention.
P370+378 - In case of fire, use CO2 carbon dioxide or alcohol resistant foam to extinguish.

GHS Storage and Disposal Phrases:
P405 - Store locked up.
P501 - Dispose of contents/container to safe area according to state and local guidelines.

Potential Health Effects (Acute and Chronic):	Though a single exposure may cause no effect, daily exposures may result in the accumulation of a harmful amount. Prolonged or repeated skin contact may cause defatting and dermatitis. Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity. Chronic: May cause reproductive and fetal effects. Laboratory experiments have shown mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage. Chronic exposure may cause effects similar to those of acute exposure. Because of this slow elimination, methanol should be regarded as a cumulative poison.
Inhalation:	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. Methanol is toxic and can very readily form extremely high vapor concentrations at room temperature. Inhalation is the most common route of occupational exposure. At first, methanol causes CNS depression with nausea, headache, vomiting, dizziness and incoordination. A time period with no obvious symptoms follows (typically 8-24 hrs). This latent period is followed by metabolic acidosis and severe visual effects which may include reduced reactivity and/or increased sensitivity to light, blurred, doubl and/or snowy vision, and blindness. Depending on the severity of exposure and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects.
Skin Contact:	Causes moderate skin irritation. May cause cyanosis of the extremities. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances. May cause irritation with pain and stinging, especially if the skin is abraded. Dermal absorption has been considered toxicologically insignificant. The cases of deep coma associated with skin contact are thought to be a consequence of gross isopropanol vapor inhalation in rooms with inadequate ventilation, rather than being attributable to percutaneous absorption of isopropanol per se.
Eye Contact:	Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage. Methanol is a mild to moderate eye irritant. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness. Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. In the eyes of a rabbit, 0.1 ml of a rabbit, 0.1 ml of a rabbit, 0.1 ml of 70% isopropyl alcohol caused conjunctivitis, isopropyl alcohol caused conjun ctivitis, iritis, and corneal opacity.
Ingestion:	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. May be fatal or cause blindness if swallowed. Aspiration hazard. May cause cardiopulmonary system effects. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. The probable oral lethal dose in humans is 240 ml (2696 mg/kg), but ingestion of only 20 ml (224 mg/kg) has, but in gestion of only 20 ml (224 mg/kg) has caused poisoning.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
64-17-5	Ethyl alcohol {Ethanol}	40.0 -70.0 %
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	1.0 -4.5 %
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	1.0 -4.5 %
7220-79-3	Methylene blue trihydrate {C.I. Basic Blue 9, trihydrate}	200.0 -2000. PPM
7647-01-0	Hydrochloric acid {Hydrogen chloride}	0.02 -0.2 %

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

In Case of Skin Contact: Wash clothing before reuse. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists.

In Case of Eye Contact: Get medical aid. Gently lift eyelids and flush continuously with water. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

In Case of Ingestion: If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Potential for aspiration if swallowed. Get medical aid immediately. If vomiting occurs naturally, have victim lean forward.

Note to Physician: 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: Replace fluid and electrolytes. Effects may be delayed.
Ethanol may inhibit methanol metabolism. Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication.

5. Fire Fighting Measures

Flash Point: 11.70 C Method Used: Estimate

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: > 350.00 C

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

Fire Fighting Instructions: Replace fluid and electrolytes. 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 explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Ethanol may inhibit methanol metabolism. During a fire, irritating and

	highly toxic gases may be generated by thermal decomposition or combustion. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Flammable liquid and vapor. May form explosive peroxides.
Flammable Properties and Hazards:	No data available.
Hazardous Combustion Products:	No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	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. Use water spray to disperse the gas/vapor. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Water spray may reduce vapor but may not prevent ignition in closed spaces. Clean up spills immediately, observing precautions in the Protective Equipment section.

7. Handling and Storage

Precautions To Be Taken in Handling:	Wash thoroughly after handling. 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. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Remove contaminated clothing and wash before reuse. Do not ingest or inhale. Use only with adequate ventilation. Avoid use in confined spaces. Take precautionary measures against static discharges. Avoid breathing dust, mist, or vapor. Do not allow to evaporate to near dryness.
Precautions To Be Taken in Storing:	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. Keep containers tightly closed. Do not store in direct sunlight. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64-17-5	Ethyl alcohol {Ethanol}	PEL: 1000 ppm	TLV: 1000 ppm	No data.
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.
7220-79-3	Methylene blue trihydrate {C.I. Basic	No data.	No data.	No data.

	Blue 9, trihydrate}				
7647-01-0	Hydrochloric acid	{Hydrogen chloride}	CEIL: 5 ppm	CEIL: 2 ppm)	No data.

Respiratory Equipment (Specify Type): 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. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

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

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): 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.

9. Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Appearance and Odor: Blue.
Ethanol odor.

pH: No data.

Melting Point: -114.10 C - -88.00 C

Boiling Point: 64.70 C - 82.00 C / 0.0 mm Hg

Flash Point: 11.70 C Estimate

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: No data. UEL: No data.

Vapor Pressure: No data.

Vapor Density (vs. Air=1): No data.

Specific Gravity (Water=1): No data.

Density: ~ 0.7910 G/CM3

Solubility in Water: No data.

Saturated Vapor Concentration: No data.

Octanol/Water Partition Coefficient: No data.

Autoignition Pt: > 350.00 C

Decomposition Temperature: No data.

Viscosity: No data.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability: Incompatible materials, ignition sources, Excess heat, confined spaces, Light.

Incompatibility - Materials To Avoid: Strong oxidizing agents, acids, Alkali metals, Ammonia, hydrazine, Peroxides, Sodium, Acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, Perchloric acid, silver nitrate, mercuric nitrate, potassium tert-butoxide, magnesium perchlorate, Acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, Reducing agents, Potassium, metals as powders (e.g. hafnium, raney nickel), powdered aluminum, powdered magnesium. Strong acids, Strong bases, Amines, ethylene oxide, isocyanates, acetaldehyde, chlorine, phosgene, Attacks some forms of plastics, rubbers, and coatings. aluminum at high temperatures.

Hazardous Decomposition or Byproducts: Carbon monoxide, irritating and toxic fumes and gases, Carbon dioxide.

Possibility of Hazardous Reactions: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

Toxicological Information: Epidemiology: No information found.
Teratogenicity: There is no human information available. Methanol is considered to be a potential developmental hazard based on animal data. In animal experiments, methanol has caused fetotoxic or teratogenic effects without maternal toxicity.
Reproductive Effects: See actual entry in RTECS for complete information.
Mutagenicity: Neurotoxicity: ACGIH cites neuropathy, vision and CNS under TLV basis.
Other Studies:

Carcinogenicity/Other Information: CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 67-63-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: Environmental: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 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.
No information available.
Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLm 961000 ppm. It may be dangerous if it enters water intakes. Methyl alcohol is expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hyroxyl radicals with an estimated half-life of 17.8 days. Bioconcentration factor for fish (golden ide) < 10.Based on a log Kow of -0.77, the BCF value for methanol can beestimated to be 0.
Ecotoxicity: Fish: Fathead Minnow: 1000 ppm; 96h; LC50Daphnia: 1000 ppm; 96h; LC50Fish: Gold orfe: 8970-9280 ppm; 48h; LC50 IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial

metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge. Physical: THOD: 2.40 g oxygen/gCOD: 2.23 g oxygen/gBOD-5: 1.19-1.72 g oxygen/g. Other: No information available.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed. RCRA U-Series:
CAS# 67-56-1: waste number U154 (Ignitable waste).

14. Transport Information

GHS Classification: Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor
Acute Toxicity: Inhalation, Category 4 - Warning! Harmful if inhaled
Specific Target Organ Toxicity (single exposure), Category 1 - Danger! Causes damage to organs {<target organs>}
Skin Corrosion/Irritation, Category 3 - Warning! Causes mild skin irritation

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Alcohols, n.o.s. (Ethanol)
DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA Number: UN1987 **Packing Group:** III

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Alcohols, n.o.s. (Ethanol)
UN Number: UN1987 **Packing Group:** III
Hazard Class: 3 - FLAMMABLE LIQUID **TDG Classification:**

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Alcohols, n.o.s. (Ethanol)
UN Number: UN1987 **Packing Group:** III
Hazard Class: 3 - FLAMMABLE LIQUID

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Alcohols, n.o.s. (Ethanol)
UN Number: UN1987 **Packing Group:** III
Hazard Class: 3 - FLAMMABLE LIQUID

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
64-17-5	Ethyl alcohol {Ethanol}	No	No	No
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	No	Yes NA	Yes
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	No	No	Yes
7220-79-3	Methylene blue trihydrate {C.I. Basic Blue 9, trihydrate}	No	No	No

7647-01-0	Hydrochloric acid {Hydrogen chloride}	Yes 500 LB	Yes NA	Yes

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64-17-5	Ethyl alcohol {Ethanol}	CA PROP.65: No; MA Oil/HazMat: Yes; NJ EHS: No; PA HSL: Yes - 1
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	CA PROP.65: Yes: RDTox.; MA Oil/HazMat: Yes; NJ EHS: Yes - 1222; PA HSL: Yes - E
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: Yes - 1076; PA HSL: Yes - E
7220-79-3	Methylene blue trihydrate {C.I. Basic Blue 9, trihydrate}	CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; PA HSL: No
7647-01-0	Hydrochloric acid {Hydrogen chloride}	CA PROP.65: No; MA Oil/HazMat: Yes; NJ EHS: Yes - 1012; PA HSL: Yes - E

16. Other Information

Revision Date: 03/21/2025 **Previous revision:** 12/29/2016

Preparer Name: A. Frontella

Additional Information About This Product: No data available.

Document & Change Control Number SDS0255.C.

Company Policy or Disclaimer: Disclaimer

The information provided in this 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.