

SDS DATE: May 29, 2023

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Oil Red O Staining Kit
PRODUCT CODES: Cat# COS-0101
RESTRICTIONS ON USE: For laboratory research purposes only. Not for drug or household use.
MANUFACTURER: AkrivisBio, Inc.
ADDRESS: 48511 Warm Springs Blvd., Suite 213, Fremont, CA 94539
EMERGENCY PHONE: 408-739-9315
OTHER CALLS:
FAX PHONE:
EMAIL: sds@akrivisbio.com

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
PBS	Liquid	48 ml	No hazards
Formalin (10%)	Solution	24 ml	See below
Oil Red O	Solid	60 mg	No hazards
Hematoxylin	Solution	24 ml	See below

Formalin:**Emergency Overview**

OSHA Hazards: Combustible liquid, Carcinogen, Target organ effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Skin sensitizer, Irritant, Corrosive

Target Organs: Eyes, Kidney, Liver, Heart, Central nervous system

GHS Classification: Flammable liquids (Category 4)
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Skin sensitization (Category 1)
Carcinogenicity (Category 2)
Specific target organ toxicity – single exposure (Category 1)

GHS Label elements, including precautionary statements**Pictogram:****Signal word:**

Danger

Hazard statement(s):

H227 Combustible liquid.
H301+331 Toxic if swallowed or if inhaled.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H370 Causes damages to organs.

Precautionary statement(s):

P210 Keep away from heat/sparks/open flames/hot surfaces – no smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 Wear respiratory protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.

HMIS Classification

Health hazard: 3
Chronic health hazard: *
Flammability: 2
Physical hazards: 0

NFPA Rating

Health Hazard: 3
Fire: 2
Reactivity Hazard: 0

Potential Health Effects

Inhalation: Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Causes respiratory tract irritation.

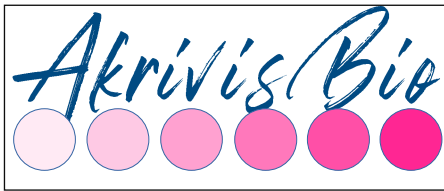
Skin: May be fatal if absorbed through skin. Causes skin burns.

Eyes: Causes eye burns.

Ingestion: Toxic if swallowed.

Hematoxylin:**Emergency Overview**

OSHA Hazards: Toxic by ingestion, Irritant



GHS Classification: Acute toxicity, Oral (Category 2)
 Eye irritation (Category 2A)
 Skin irritation (Category 2)
 Specific target organ toxicity – single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram: none
Signal word: none
Hazard statement(s): none
Precautionary statement(s): none

HMIS Classification

Health hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: Harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Formalin	50-00-0	200-001-8	30.03	CH ₂ O
Aluminium ammonium bis(sulphate)	7784-26-1	232-055-3	237.15	(NH ₄)Al(SO ₄) ₂
Hematoxylin	517-28-2	208-237-3	302.27	C ₁₆ H ₁₄ O ₆

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5: FIRE-FIGHTING MEASURES

Condition of flammability: Not flammable or combustible.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Hazardous combustion products: Hazardous decomposition products formed under fire conditions— see section 10.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – no smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage

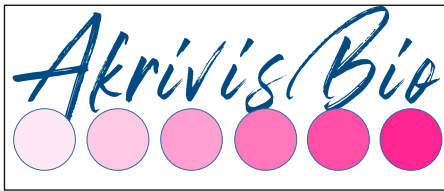
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: room temperature (~23 °C).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Formalin:

Components	CAS-No.	Value	Control parameters	Basis
Formalin	50-00-0	C	0.3 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks:	Eye & upper respiratory tract irritation. Suspected human carcinogen. Sensitizer.			
	Sustance listed: for more information see OSHA document 1910.1048			
	Sustance listed: for more information see OSHA document 1910.1048			
		TWA	0.016 ppm	USA. NIOSH Recommended Exposure Limits
	Potential occupational carcinogen. See Appendix A.			
		C	0.1 ppm	USA. NIOSH Recommended Exposure Limits
	Potential occupational carcinogen. See Appendix A. 15 minute ceiling value.			
		TWA	0.016 ppm	USA. NIOSH Recommended Exposure Limits
	Potential occupational carcinogen.			



		C	0.1 ppm	USA. NIOSH Recommended Exposure Limits
Potential occupational carcinogen.				

Hematoxylin:

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Formalin	Hematoxylin
Appearance:	Liquid	Liquid
pH:	4.5-6	No data available
Water Solubility:	Completely miscible	No data available
Other Solubility:	No data available	No data available
Boiling Point (°C):	100 °C (212 °F)	No data available
Melting Point (°C):	No data available	100 °C (212 °F)
Flash Point (°C):	85 °C (185 °F)	No data available
Ignition Temperature (°C):	No data available	No data available
Density:	1.080 g/cm ³	No data available

SECTION 10: STABILITY AND REACTIVITY

Property	Formalin	Hematoxylin
Chemical stability:	Stable under recommended storage conditions	
Conditions to avoid:	Heat, flames, and sparks	No data available
Materials to avoid:	Strong bases, acids, oxidizing agents, alkali metals, strong oxidizing agents, amines, strong acids, acid chlorides, acid anhydrides, reducing agents, peroxides, isocyanates, phenol, aniline	Strong oxidizing agents
Hazardous decomposition products:	Carbon oxides	Carbon oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Formalin:

Acute toxicity: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: 1 – Group 1: Carcinogenic to humans (Formaldehyde)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Formaldehyde)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

Potential Health Effects

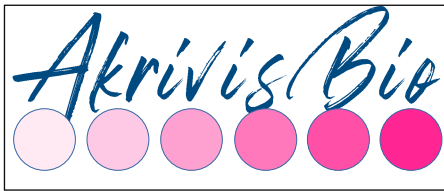
Inhalation: Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Causes respiratory tract irritation.

Skin: May be fatal if absorbed through skin. Causes skin burns.

Eyes: Causes eye burns.

Ingestion: Toxic if swallowed.

Signs and Symptoms of Exposure: Exposure may cause nausea, dizziness, gastrointestinal disturbance, weakness, confusion, drowsiness, unconsciousness, and/or convulsions.



Synergistic effects: no data available
Additional information: RTECS: not available

Hematoxylin:

Acute toxicity: no data available
Skin corrosion/irritation: no data available
Serious eye damage/eye irritation: no data available
Respiratory or skin sensitization: no data available
Germ cell mutagenicity: no data available
Carcinogenicity:

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): no data available
Specific target organ toxicity – repeated exposure (GHS): no data available

Potential Health Effects

- Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.
- Skin:** May be harmful if absorbed through skin. Causes skin irritation.
- Eyes:** Causes eye irritation.
- Ingestion:** Harmful if swallowed.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional information: RTECS: not available

SECTION 12: ECOLOGICAL INFORMATION

Persistence and degradability: no data available
Toxicity: no data available
Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available
Other adverse effects: no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Observe all federal, state, and local environmental regulations.
Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Formalin:

DOT (US): UN-Number: 1993 Class: CBL Packing group: III; Proper shipping name: Combustible liquid, n.o.s. (Formalin); Reportable Quantity (RQ): 2500 lbs.; Marine pollutant: No; Poison Inhalation Hazard: No
IMDG: Not dangerous goods.
IATA: Not dangerous goods.

Hematoxylin:

DOT (US): Not dangerous goods.
IMDG: Not dangerous goods.
IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: Formalin: Combustible liquid, Carcinogen, Target organ effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Skin sensitizer, Irritant, Corrosive

Hematoxylin: Toxic by ingestion, Irritant

SARA 302 Components: The following components are subject to reporting levels established by SARA Title III, Section 302:

Formaldehyde, CAS-No. 50-00-0; Revision Date: 2007-07-01

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

Formaldehyde, CAS-No. 50-00-0; Revision Date: 2007-07-01

SARA 311/312 Hazards: Hematoxylin: Acute Health Hazard

Formalin: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: Formaldehyde, CAS-No. 50-00-0; Revision Date: 2007-07-01

Pennsylvania Right To Know Components: Formaldehyde, CAS-No. 50-00-0; Revision Date: 2007-07-01

Hematoxylin, CAS-No. 517-28-2

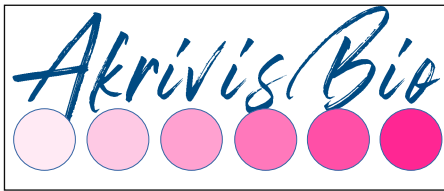
New Jersey Right To Know Components: Formaldehyde, CAS-No. 50-00-0; Revision Date: 2007-07-01

Hematoxylin, CAS-No. 517-28-2

Aluminium ammonium bis(sulphate): CAS-No. 7784-26-1 Revision Date

California Prop. 65 Components: WARNING! This product contains a chemical known to the State of California to cause cancer.

Formaldehyde, CAS-No. 50-00-0; Revision Date: 2007-09-28



EU regulations

Component	Risk Phrases	Safety Phrases
Formalin	R23/24/25, R40, R43	S36/37
Hematoxylin	R25, R36/37/38	S24/25

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. AkrivisBio Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.