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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: Auramine Counterstain (Potassium Permanganate)  
Catalog Number: SA87  
Product Use: For laboratory use only

Manufacturer's Name: Dalynn Biologicals Inc.  
Supplier's Name: Dalynn Biologicals Inc.  
Address: 3253 – 34 Avenue NE  
Calgary, AB, Canada  
T1Y 6X2

Telephone: 1-888-404-4045  
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Chemical Emergency: 1-613-996-6666  
Phone Number Only

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**2. HAZARD IDENTIFICATION****Emergency Overview****GHS Classification**

Acute toxicity, Oral (Category 5)  
Acute aquatic toxicity (Category 3)  
Chronic aquatic toxicity (Category 3)

**GHS Label Elements, Including Precautionary Statements**

Pictogram No Symbol

Signal word None

Hazard statement(s)

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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.

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.
P361 + P364	Take off immediately all contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/ container to an approved waste disposal plant.

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### 3. COMPOSITION & INFORMATION ON INGREDIENTS

INGREDIENT	%	CAS-No.	EC-No.	Index-No.
Potassium permanganate	0.5	7722-64-7	231-760-3	025-002-00-9
Water	>99	7732-18-5	231-791-2	-

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### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move affected individual out of affected area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Take victim to hospital and consult a physician.

#### In case of skin contact

Take off contaminated clothing. Wash affected area with soap and plenty of water. Take victim to hospital and consult a physician.

#### In case of eye contact

Flush eyes with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do not induce vomiting. Rinse mouth with water if patient is conscious. Take patient to hospital and consult a physician.

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### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Contains mostly water therefore the flammability hazard is minimal.

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions: carbon oxides (ie. carbon dioxides, carbon monoxide), potassium oxides, manganese oxides

#### Explosion data – sensitivity to mechanical impact

No

#### Explosion data – sensitivity to static discharge

No

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Collect spillage and hold for disposal.

### Methods and materials for containment and cleaning up

Wearing appropriate safety gear including chemical resistant gloves and dust mask or respirator, soak up with inert absorbent material. Place in a sealed container and hold for disposal.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use in area with adequate ventilation.

### Conditions for safe storage

Keep container tightly closed in a well ventilated place away from direct light or sunlight.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Potassium permanganate	7722-64-7	TWA	0.2 mg/m <sup>3</sup>	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
Remarks		TWA	0.2 mg/m <sup>3</sup>	Canada. British Columbia OEL
		TWAEV	5 mg/m <sup>3</sup>	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1
		TWA	0.2 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)

### Engineering measures

Ensure adequate ventilation especially in confined areas. If desired, use mechanical exhaust or laboratory fume hood to avoid exposure.

### Personal protective equipment

#### Respiratory protection

Use in area with adequate ventilation. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type ABEK (EN14387) respirator cartridges as a backup to engineering controls. 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 after use.

#### **Eye protection**

Face shield and/or safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).

#### **Skin and body protection**

Wear appropriate clothing such as a lab coat that covers as much of the body as possible. Complete suit can also be worn if desired.

#### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Appearance**

Form	Liquid
Color	Purplish-violet

### **Safety data**

pH	No data available
Melting point/ freezing point	No data available
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Auto ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	No data available
Density	No data available
Water solubility	soluble
Partition coefficient/ n-octanol/water	No data available
Relative vapor density	No data available
Odour	No data available
Odour threshold	No data available
Evaporation rate	No data available

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## **10. STABILITY AND REACTIVITY**

### **Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

**Materials to avoid**

Strong reducing agents, strong acids, powdered metals

**Hazardous decomposition products**

Other decomposition products – No data available

Hazardous decomposition products formed under fire conditions – Carbon oxides, potassium oxides, manganese oxides

**Hazardous polymerization**

Hazardous polymerization does not occur

**Hazardous reactions**

None under normal processing

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Oral LD50**

LD50 Oral – Rat – 1,090 mg/kg (potassium permanganate)

**Inhalation LC50**

No data available

**Dermal LD50**

No data available

**Other information on acute toxicity**

No data available

**Skin corrosion/irritation**

Skin – Rabbit – Corrosive after 1 to 4 hours of exposure (potassium permanganate)

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

Maximization test – Guinea pig

Result: Does not cause skin sensitization

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

This table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Potassium permanganate	7722-64-7	Not listed	Not listed	Not listed	Not listed	Not listed

IARC: (International Agency for Research on Cancer)

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Group 1 - Carcinogenic to Humans Group

2A - Probably Carcinogenic to Humans Group

2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

### 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** May be harmful if inhaled.

**Skin** May cause skin irritation.

**Eyes** May cause eye irritation.

**Ingestion** Potassium permanganate is poisonous but given the extremely diluted nature of the chemical contained in this product no severe side effects are expected unless ingested in large quantities.

### Signs and Symptoms of Exposure

Symptoms of ingestion include abdominal pain, nausea, vomiting, diarrhea, methemoglobinemia. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Synergistic effects

No data available

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Potassium permanganate	Not listed	Rainbow trout (Oncorhynchus mykiss) LC50 = 0.3 – 0.6 mg/L/96h	Not listed	EC50 = 0.084 mg/L/48h

### Persistence and degradability

Biodegradability May persist based on information available

### Bio accumulative potential

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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**15. REGULATORY INFORMATION****International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Potassium permanganate	X	X	-	231-760-3	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by them.

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**16. OTHER INFORMATION****Further information**

Copyright 2018 Dalynn Biologicals Inc. The above information is believed to be correct but does not purport to be all inclusive and shall be only used 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. Dalynn Biologicals Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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