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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: PYR / LAP Reagent  
Catalog Number: RP95  
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  
Fax: (403) 250-9010  
Chemical Emergency: 1-613-996-6666  
Phone Number Only

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

Flammable liquids (Category 3)  
Acute toxicity, Oral (Category 4)  
Acute toxicity, Inhalation (Category 3)  
Acute toxicity, Dermal (Category 5)  
Reproductive toxicity (Category 1B)

**GHS Label Elements, Including Precautionary Statements**

Pictogram



Signal word            Danger

Hazard statement(s)

H226            Flammable liquid or vapor.  
H302            Harmful if swallowed.  
H313            May be harmful in contact with skin.  
H331            Toxic if inhaled.  
H360            May damage fertility or the unborn child

Precautionary statement(s)

P210            Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233            Keep container tightly closed  
P261            Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264            Wash skin thoroughly after handling.  
P280            Wear protective gloves & clothing/ eye protection/ face protection.

P310 Immediately call a poison center or doctor.  
P302+P352 If on skin: Wash with plenty of water.

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### 3. COMPOSITION & INFORMATION ON INGREDIENTS

Synonyms                      PYR Reagent

INGREDIENT	%	CAS-No.	EC-No.	Index-No.
2-Ethoxyethanol	50	110-80-5	203-804-1	603-012-00-X
Acetic acid	2.7	64-19-7	200-580-7	607-002-00-6
Lauryl sulfate	2.7	151-21-3	205-788-1	-

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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. Consult a physician.

#### In case of skin contact

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

#### In case of eye contact

Flush eyes with plenty of water for at least 15 minutes. If feeling unwell, take patient to hospital 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

Flammable in the presence of sparks, ignition source, or open flame. No smoking.

#### 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

#### Explosion data – sensitivity to mechanical impact

No data available.

#### Explosion data – sensitivity to static discharge

No data available.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

### Environmental precautions

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

### Methods and materials for containment and cleaning up

Wearing appropriate safety gear including chemical resistant gloves and dust mask or respirator. Soak up with paper towel and place in 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. Keep away from sources of ignition; no smoking.

### Conditions for safe storage

Store at refrigerated conditions at 4 to 8°C away from direct light or sunlight. Keep container tightly closed in a well ventilated place away from ignition sources.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
2-Ethoxyethanol	110-80-5	TWA	0.1 ppm 0.4 mg/m <sup>3</sup>	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
Remarks	Substance may be readily absorbed through intact skin			
		TWA	5 ppm	Canada. British Columbia OEL
	Adverse reproductive effect Contributes significantly to the overall exposure by the skin route			
		TWAEV	5 ppm 18 mg/m <sup>3</sup>	Canada. Ontario OELs
	Skin			
		TWAEV	5 ppm 18 mg/m <sup>3</sup>	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1
	Skin (percutaneous)			
		TWA	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
Acetic acid	64-19-7	TWA	10 ppm 25 mg/m <sup>3</sup>	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
		STEL	10 ppm 37 mg/m <sup>3</sup>	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
		TWA	10 ppm	Canada. British Columbia OEL
		STEL	15 ppm	Canada. British Columbia OEL
		STEV	15 ppm 37 mg/m <sup>3</sup>	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1

		TWAEV	10 ppm 25 mg/m <sup>3</sup>	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1
		TWA	10 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	15 ppm	USA. ACGIH Threshold Limit Values (TLV)

## 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 CEN (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	Light yellow

### Safety data

pH	~3.5 to 4 at 20°C (68°F)
Melting point/ freezing point	No data available
Boiling point	No data available
Flash point	42°C (108°F) cc – 2-ethoxyethanol
Ignition temperature	238°C (460°F) – 2-ethoxyethanol
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 oxidizing agents, copper alloys, strong acids and bases.

### Hazardous decomposition products

Other decomposition products – No data available

Hazardous decomposition products formed under fire conditions – Carbon monoxide, carbon dioxide, peroxides

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

Rat – 2,125 mg/kg (2-ethoxyethanol)

Guinea pig – 1,400 mg/kg (2-ethoxyethanol)

Rat – 3,315 mg/kg (acetic acid)

#### Inhalation LC50

Rat – 2,000 ppm / 7h (2-ethoxyethanol)

Rat – 7.36 mg/L / 8h (2-ethoxyethanol)

Mouse – 5,620 ppm / 1h (acetic acid)

Rat – 11.4 mg/L / 4h (acetic acid)

#### Dermal LD50

Rabbit – 3,300 mg/kg (2-ethoxyethanol)

Rabbit – 1,112 mg/kg (acetic acid)

### Other information on acute toxicity

No data available

### Skin corrosion/irritation

Skin – Rabbit – No skin irritation (2-ethoxyethanol)

The amount of acetic acid in this product is well below what is in household vinegar (2.6%) therefore no irritation is expected.

**Serious eye damage/eye irritation**

Eyes – Rabbit – Mild eye irritation – 24h (2-ethoxyethanol)

**Respiratory or skin sensitization**

Maximization Test (GPMT) – Guinea pig – Does not cause skin sensitization: OECD Test Guideline 406

**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 probable, possible or confirmed human carcinogen by ACGIH.

**Reproductive toxicity**

2-ethoxyethanol may cause reproductive disorders.

**Teratogenicity**

2-ethoxyethanol may cause congenital malformation in the fetus, and is a presumed human reproductive toxicant.

**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**

<b>Inhalation</b>	May cause respiratory tract irritation. Inhalation overexposure may lead to central nervous system depression, producing effects such as dizziness, headache, confusion, in-coordination, nausea, weakness, and loss of consciousness. Extreme exposures may cause other CNS effects including death.
<b>Skin</b>	May cause mild skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. Substance is readily absorbed through the skin. If absorbed, causes symptoms similar to those of ingestion.
<b>Eyes</b>	Causes eye irritation on contact. Caused moderate eye irritation in a standard Draize test.
<b>Ingestion</b>	May cause irritation of the digestive tract. May cause liver and kidney damage. Exposure may cause anemia and other blood abnormalities. May be harmful if swallowed. May cause central nervous system depression.

**Signs and Symptoms of Exposure**

Acute symptoms of overexposure include: narcosis, liver injury may occur, kidney injury may occur. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

No data available

**Additional information**

RTECS: Not available

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**12. ECOLOGICAL INFORMATION**

**Toxicity**

2-ethoxyethanol:

Toxicity to fish	LC50 – Lepomis macrochirus - >10,000 mg/l - 96 h
Toxicity to daphnia and aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 1892 mg/l - 48 h

Acetic acid:

Toxicity to fish semi-static test	LC50 - Oncorhynchus mykiss - >1,000 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 300.82 mg/l - 48 h other (OECD Test Guideline 202)

**Persistence and degradability**

2-ethoxyethanol:

Biodegradability	Result: 63 - 83% - Readily biodegradable Method: OECD Test Guideline 301C Remarks: No data available
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Acetic acid:

Biodegradability	aerobic - Exposure time 30 d Result: 99 % - Readily biodegradable. Remarks: Expected to be biodegradable
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Biochemical Oxygen Demand (BOD) 880 mg/g

**Bioaccumulative 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)**

UN Number: 1171    Class: 3    Packing Group: III

Proper Shipping Name: Ethylene glycol monoethyl ether solution

Reportable Quantity (RQ): 1000 lbs

Marine Pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN Number: 1171    Class: 3    Packing Group: III    EMS-No: F-E, S-D

Proper Shipping Name: Ethylene glycol monoethyl ether solution

Marine Pollutant: No

**IATA**

UN Number: 1171    Class: 3    Packing Group: III

Proper Shipping Name: Ethylene glycol monoethyl ether solution

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**15. REGULATORY INFORMATION**

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 2020 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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