

Safety Data Sheet



Revision Date: 7/29/2014

SDS #: SDS-10274-01

Random Primer Biotinylation Kit

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

Random Primer Biotinylation Kit

Product Code

60-01-00

Kit Components:

Biotinylated Quantitation Standard	
2.5X Random Primer Solution	600-0001
DNTP Mixture	600-0002
Klenow Fragment	600-0003
Control Template DNA	600-0004
Stop Buffer	600-0005
Biotinylated Quantitation Standard	600-0007
DEPC Water	50-86-03

Recommended Use Kit (See Attached Safety Data Sheets For Components Listed Above)

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755
Fax #: 1-301-948-0169
Web: www.kpl.com
Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1) 800 424 8802	Hours: 24 hours/day, 7 days/week

CHEMTREC:

CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

Safety Data Sheet



Revision Date: 7/31/2014

Klenow Fragment

SDS #: SDS-10257-01

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

Klenow Fragment

Product Code

600-0003

Hazardous Reagent

Klenow Fragment

Hazardous Reagent Product code

Catalog No. listed above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755

Fax #: 1-301-948-0169

Web: www.kpl.com

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2. HAZARD IDENTIFICATION

Hazard Type	GHS Classification in accordance with 29 CFR 1910 (OSHA HCS): The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment.
Principle Route of Exposure	Ingestion, Inhalation and Skin contact.
Acute Effects: Eye:	May cause redness and irritation
Acute Effects: Skin:	Dry skin.
Acute Effects: Inhalation:	Data for 100% Glycerol: Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly on spraying.
Acute Effects: Ingestion:	Diarrhoea.
Chronic Effects:	Not Available

Additional Information

Not Available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
Klenow Fragment	GLYCEROL	>50%	56-81-5

GHS Classification

Not Applicable:

The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Regulation (EC) No 1272/2008

4. FIRST AID MEASURES

General Advice	Wash contaminated clothing before reuse. Consult a physician if irritation persists.
Oral Exposure	Rinse mouth. Refer for medical attention.
Inhalation Exposure	Remove subject to fresh air. Seek medical attention if necessary.
Skin Exposure	Rinse with copious amounts of water
Eye Exposure	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray. Alcohol-resistant foam. Dry powder. Carbon dioxide
Unusual Fire and Explosive Hazards	Data for 100% Glycerol: In case of fire: keep drums, etc., cool by spraying with water.
Flash Point	Data for 100% Glycerol: 176°C c.c.
Autoignition Temperature	Data for 100% Glycerol: 393°C
Flammability Statement	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Specific hazards arising from the chemical	Upon evaporation of water, glycerol may omit toxic fumes under fire conditions. In the event of fire and/or explosion do not breathe fumes.
Protective equipment and precautions for firefighters	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin and clothing.
Environmental Precautions	Not Applicable
Method of Containment	Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place.
Methods of Clean-up	Clean-up with copious amounts of water.
Other Information	Not Applicable

7. HANDLING AND STORAGE

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Handling: Wear appropriate PPE. See section 8

Storage: Store at -20°C.

8. EXPOSURE CONTROL

Respiratory Protection	Ventilation.
Eye Protection	Safety goggles.
Skin Protection	Protective gloves and clothing required
Ingestion	Do not eat, drink, or smoke during work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless solution
Physical State	Liquid
Odor	Not Available
Odor Threshold	Not Available
pH	Not Available
Boiling Point	Data for 100% Glycerol: 290°C
Evaporation Rate	Not Available
Vapor Density	Data for 100% Glycerol: 3.2
Vapor Pressure	Data for 100% Glycerol: 0.01
Relative Density	Data for 100% Glycerol: 1.26
Auto-Ignition Temperature	Data for 100% Glycerol: 393°C
Water Solubility	Dilutable
Flammability	Data for 100% Glycerol: 393°C
Flash Point	Data for 100% Glycerol: 176°C c.c.
Viscosity	Viscous
Oxidizing Properties	Not Available
Explosive Properties	Data for 100% Glycerol: 2.6 - 11.3
Additional Parameters	See Datasheet for other Product Information.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal condition
Conditions to avoid	Data for 100% Glycerol: NO open flames.
Incompatibility Materials to Avoid	Strong oxidizing agents and strong bases
Hazardous Decomposition Products	Carbon Monoxide, Carbon Dioxide
Hazardous Polymerization	Will not occur
Possibility of hazardous reactions	Data for 100% Glycerol: Reacts with strong oxidants causing fire and explosion hazard.

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral Data for 100% Glycerol: LD50 oral rat: 12600 mg/kg Reference: Federation Proceedings, Federation of American Societies for Experimental Biology. Vol. 4, Pg. 142, 1945.

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LD50 Dermal	Data for 100% Glycerol: LD50 dermal rat/rabbit: > 10000 mg/kg Species: Rabbit Reference: BIOFAX Industrial Bio-Test Laboratories, Inc., Data Sheets. Vol. 9-4/1970,
LC50 Inhalation	Not Available
<u>Chronic Toxicity</u>	
Carcinogenicity	Not Available
Irritation	Yes - May Occur
Corrosivity	Not Available
Sensitization	Not Available
Neurological Effects	Not Available
Mutagenic Effects	Not Available
Reproductive Effects	Not Available
Developmental Effects	Not Available
Target Organ Effects	Not Available
Other adverse effects	Not Available

12. ECOLOGICAL MEASURES

Ecotoxicity	Data for 100% Glycerol: Toxicity threshold (cell multiplication inhibition test) Algae (<i>Microcystis aeruginosa</i>) 2900 mg/l ; Protozoa (<i>Entosiphon sulcatum</i>) 3200 mg/l ; LC50 Goldfish >5000 mg/l/24 hr - modified ASTM D 1345 [Verschuere, K. Handbook of Environmental Data of Organic Chemicals. 2nd ed. New York, NY: Van Nostrand Reinhold Co., 1983., p. 695]
Persistence/Degradability	Data for 100% Glycerol: Readily biodegradable
Mobility in Environmental Media	Data for 100% Glycerol: Very high mobility in soil [Swann RL et al; Res Rev 85: 17-28 (1983)]
Bioaccumulation/Accumulation	Not expected

13. DISPOSAL MEASURES

Waste Disposal Method:	Observe all Federal, State and Local laws concerning health and pollution.
Contaminated Packaging:	Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.
US EPA Waste Number:	Not Applicable

14. TRANSPORTATION MEASURES

DOT:	Not Available
IATA:	Not Available
ADR (road)/ RID (rail):	Not Available
IMDG (sea):	Not Available
General Transport Regulations	Not Applicable

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only

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those as required by 29 CFR 1910.1200 (OSHA HCS).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

This product contains no chemical or chemicals which are subject to the reporting requirements of the Clean Air Act.

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: None Listed

State Right to Know Act

Chemical Name GLYCEROL

Massachusetts	Listed
New Jersey	Listed
Pennsylvania	Listed
New York	Not Listed
Rhode Island	Not Listed

International Inventories

Chemical Name GLYCEROL

TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

EU Regulations

Annex I Index#	Not Applicable
Classification	Not Applicable: The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Regulation (EC) No 1272/2008
Risk Phrases	Not Applicable
Safety Phrases	Not Applicable
Symbols and Indications of Danger	Not Applicable
Specific Concentration Limits	Not Applicable
Export and Import	This substance is not listed in the Annex I of Regulation (EC) No 649/2012.
European Priority List	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date: 7/31/2014

MATERIAL SAFETY DATA SHEET



Issue Date: 20 March, 2006
Revision Date: March 12, 2003

1. **IDENTIFICATION**

DEPC Treated Water

CATALOG NO.

50-86-03 (Formerly 600-0006)

2. **COMPOSITION AND INGREDIENTS INFORMATION**

<u>Reagent</u>	<u>Weight %</u>	<u>CAS #</u>
DiEthyl PyroCarbonate	0.1	1609-47-8

3. **HAZARDS IDENTIFICATION**

Suspected Carcinogen. Toxic. Toxic by inhalation, skin contact, and ingestion.

4. **FIRST-AID PROCEDURES**

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention if necessary.

Eye Contact: Flush eyes with copious amounts of water.

Skin Contact: Flush the skin with copious amounts of water and soap. If irritation persists, seek medical attention.

Ingestion: If conscious, rinse mouth with water. Seek medical attention.

5. **FIRE FIGHTING PROCEDURES**

Extinguishing Media: Water spray, Carbon Dioxide, Dry Chemical powder or appropriate foam.

Unusual Fire and Explosion Hazards: Wear self-contained breathing apparatus, gloves and appropriate clothing to prevent contact.

6. **ACCIDENTAL RELEASE MEASURES**

Wear self-contained breathing apparatus, gloves and appropriate clothing to prevent contact. Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area after pick-up is complete.

7. **EXPOSURE CONTROL (PERSONAL PROTECTIVE EQUIPMENT)**

Inhalation: NIOSH/MSHA - approved respirator

Eye Contact: Safety goggles. Eye wash station.

Skin Contact: Chemical resistant gloves and appropriate clothing. Chemical shower.

8. **HANDLING AND STORAGE**

Keep tightly closed. Keep away from heat and open flame. Moisture sensitive. May develop pressure.
Store 4°C

9. **PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Colorless liquid

Solubility in Water: Soluble

Flash Point: ≥69°C

10. **STABILITY AND REACTIVITY INFORMATION**

Incompatibility Materials to Avoid: Strong oxidizing agents, strong acids, strong bases, strong reducing agents, ammonia.

11. **TOXICOLOGICAL INFORMATION**

Hazardous Decomposition Products: May decompose on exposure to moist air or water. Toxic fumes of: Carbon Monoxide and Carbon Dioxide. DEPC may react with ammonia to form Urethane. Urethane may be a carcinogen as suggested by animal studies.

Target Organs: Lungs, thorax (respiration), see RTECS for complete toxicological information.

12. ECOLOGICAL INFORMATION

Data not available.

13. DISPOSAL GUIDELINES

Observe all Federal, State, and Local laws concerning health and pollution.

14. TRANSPORT INFORMATION

Contact your shipper for transportation information.

15. REGULATORY INFORMATION AND CONSIDERATIONS

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 g 2.C1

16. OTHER

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes.