

MATERIAL SAFETY DATA SHEET

Date Revised: March 27, 2013

1. PRODUCT AND COMPANY IDENTIFICATION**Product Name:** Ready-to-Use 1 kb DNA Ladder or Ready-to-Use 100 bp DNA ladder**Catalog Number:** 31022, 31032**Unit Size:** 1.5 mL**Manufacturer/Supplier:** Biotium, Inc.

3159 Corporate Place, Hayward, CA 94545, USA

Phone: 1-510-265-1027, Fax: 1-510-265-1352

Web: <http://www.biotium.com>**2. HAZARDS IDENTIFICATION****Classification according to Regulation (EC) No 1272/2008[CLP]**

None

Classification according to Directive 1999/45/EC

None

Labelling according to Regulation (EC) No 1272/2008[CLP]**Hazard pictogram** GHS07(glycerol)**Signal word** Warning (glycerol)**Hazard statements**

Glycerol: H315 Causes skin irritation; H319 Causes serious eye irritation

Precautionary statements

Glycerol:

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

P302+ P352 - IF ON SKIN: Wash with plenty of soap and water

P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification (glycerol)

Health hazard: 1

Flammability: 1

Physical hazards: 0

NFPA Rating (glycerol)

Health hazard: 1

Fire: 1

Reactivity Hazard: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component A: DNA Ladder

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to 67/548/EEC	Classification according to regulation (EC)No1278/2008
Water	7732-18-5	231-791-2	--	95-97	None	None
Tris (hydroxymethyl) aminomethane	77-86-1	201-064-4	--	<2	None	None
Ethylenediamine	6381-92-6	200-449-4	--	<1	None at given	None at given

tetraacetic acid (EDTA)					concentration	concentration
DNA ladder	N/A	N/A	--	0.01	None	None
Glycerol	56-81-5	200-289-5	--	2.5	Skin Irritant 2, Eye Irritant 2	Skin Irritant 2, Eye Irritant 2
Ficoll PM400	26873-85-8	--	--	1.25	--	--
Patent Blue VF	129-17-9	--	--	0.017	--	--
Bromophenol Blue	115-39-9	--	--	0.008	--	--

Component B (99962): 6X Loading Buffer

Name	CAS No.	EC No.	Index No.	Weight %	Classification according to 67/548/EEC	Classification according to regulation (EC)No1278/2008
Water	7732-18-5	231-791-2	--	77	None	None
Glycerol	56-81-5	200-289-5	--	15	Skin Irritant 2, Eye Irritant 2	Skin Irritant 2, Eye Irritant 2
Ficoll PM400	26873-85-8	--	--	7.5	--	--
Patent Blue VF	129-17-9	--	--	0.1	--	--
Bromophenol Blue	115-39-9	--	--	0.05	--	--

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. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES**Suitable extinguishing media**

Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

Special protective equipment for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition.

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

Contain spillage. Soak up spilled substance with inert absorbent material. . Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapor or mist.
 Avoid direct contact with substance.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.
 Store at -20 °C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Substance
 CAS no.

country	Austria	Belgium	Denmark	European Union	France	Germany
Limit value, 8hours	--	--	--	--	--	--
Limit value, short term	--	--	--	--	--	--

country	Hungary	Italy	Poland	Spain	Sweden	Netherlands	United Kingdom
Limit value, 8hours	--	--	--	--	--	--	--
Limit value, short term	--	--	--	--	--	--	--

country	United Kingdom	USA-NIOSH	USA-OSHA	Australia	Canada	Japan	South Korea
Limit value, 8hours	--	--	--	--	--	--	--
Limit value, short term	--	--	--	--	--	--	--

Personal protective equipment

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.

Respiratory protection

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	DNA Ladder	6X Loading Buffer
Appearance	Blue solution	Blue solution
Odor	Not determined	Not determined
Odor threshold	Not determined	Not determined
pH	Not determined	Not determined
Melting point/freezing point	Not determined	Not determined
Boiling point	Not determined	Not determined
Flash point	Not determined	Not determined
Evaporate rate	Not determined	Not determined
Flammability	Not determined	Not determined
Explosive limits	Not determined	Not determined
Vapor pressure	Not determined	Not determined
Vapor density	Not determined	Not determined
Relative density	Not determined	Not determined
Solubility	Not determined	Not determined
Partition coefficient:n-octanol/water	Not determined	Not determined
Auto-ignition temperature	Not determined	Not determined
Decomposition temperature	Not determined	Not determined
Viscosity	Not determined	Not determined
Explosive properties	Not determined	Not determined
Oxidising properties	Not determined	Not determined

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

No data available

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Oral LD50 no data available

Inhalation LC50 no data available

Dermal LD50 no data available

Other information on acute toxicity no data available

Skin corrosion/irritation glycerol causes skin irritation

Serious eye damage/eye irritation glycerol causes serious eye irritation

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

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Additional Information

RTECS: None

12. ECOLOGICAL INFORMATION

Toxicity no information available

Persistence and degradability no information available

Biodegradation no information available

Mobility in soil no information available

Results of PBT and vPvB assessment no information available

Other adverse effects no information available

Additional information no information available

13. DISPOSAL CONSIDERATIONS

Do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

14. TRANSPORT INFORMATION

IATA, IMDG, DOT(US) not dangerous good during transportation
UN number none
UN proper shipping name none
Transport hazard class none
Packing group none
Environmental hazards none
Special precaution for user none

15. REGULATION INFORMATION

US Federal Regulations

Us Toxic Substances Control Act(TSCA): Not listed
SARA 302: No chemicals were found .
SARA 313: No chemicals were found.
SARA 311/312 Hazards : No chemicals were found.

16. OTHER INFORMATION

Classification according to Regulation (EC) Nr. 1272/2008

Prepared by: Regulatory Department
Biotium Inc.

Version no. 2

Reason for revision Application of CLP labeling and corresponding requirements

The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. 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. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.