

MATERIAL SAFETY DATA SHEET

Date Revised: February 4, 2011

1. PRODUCT AND COMPANY INFORMATION

Product Name: Fast Probe Master Mix - ROX
Catalog Number: 31016/31016-1/31016-2/31016-T
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. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components:

Chemical Name	CAS-No.	EINECS-No.	Weight %
Dimethylsulfoxide (DMSO)	67-68-5	-	5-10 %
Glycerol	56-81-5	-	10-15 %
Tris Base	77-86-1	201-064-4	1-5 %
ROX dye	-	-	0.1-1.0 %

3. HAZARDS IDENTIFICATION

European labeling in Accordance with EC Directives

Chemical Name	Classification	R-Phrase(s)
Dimethylsulfoxide(DMSO)	Xn- Harmful, Xi-Irritant	R22-Harmful if swallowed, R36/38-Irritating to eyes and skin
Glycerol	Not listed	Not listed
Tris Base	Xn-Harmful	R36/38-Irritating to eye and skin
ROX dye	Not listed	Not listed

4. FIRST AID MEASURES

Skin contact Wash off immediately with soap and plenty of water. If skin irritation persists, call a Physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion Never give anything by mouth to an unconscious person. Consult a physician if necessary

Inhalation Move to fresh air. Oxygen or artificial respiration if needed.

Note to physician Treat symptomatically

5. FIRE FIGHTING MEASURES

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Dry chemical. Foam.

Special protective equipment for Firefighters Wear self-contained breathing apparatus and protective suit

Chemical Name	Autoignition Temperature	Flash Point	Explosion Limits: Lower	Explosion Limits: Upper	NFPA
Dimethylsulfoxide(DMSO)	215 deg C(419 deg F)	87,8 deg C (190 deg F)	2.6 vol %	43 vol %	Health:2 ; Flammability:2; Instability:2
Glycerol	400 deg C(752 deg F)	193 deg C (379.4 deg F)	1.1 vol %	Not available	Health:0; Flammability:1; Instability:0
Tris Base	Not available	Not available	Not available	Not available	Health:1; Flammability:0;

					Instability:0
ROX dye	Not available	Not available	Not available	Not available	Not available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment
Methods for cleaning up	Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling	Always wear recommended Personal Protective Equipment. Avoid contact with skin and eyes.
Storage	Keep in a dry place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure limits:

Chemical Name	EU OEL (TWA)	EU OEL (STEL)	EU Skin Notation	Austria OEL (MAK)	Belgium (TWA)
Dimethylsulfoxide	-	-	-	160 mg/m ³ 50 ppm	-
Glycerol	-	-	-	-	10 mg/m ³
Tris Base	-	-	-	-	-
ROX dye	-	-	-	-	-

Chemical Name	Denmark (TWA)	Finland OEL (TWA)	France OEL (VME)	Germany OEL (TWA)	Ireland (TWA)
Dimethylsulfoxide	-	-	-	160 mg/m ³	-
Glycerol	-	-	10 mg/m ³	-	10 mg/m ³
Tris Base	-	-	-	-	-
ROX dye	-	-	-	-	-

Chemical Name	Italy OEL (TWA)	Netherlands OEL (MAC)	Spain OEL (TWA)	United Kingdom
Dimethylsulfoxide	-	150 mg/m ³ 50 ppm	-	-
Glycerol	-	10 mg/m ³	10 mg/m ³	10 mg/m ³
Tris Base	-	-	-	-
ROX dye	-	-	-	-

POTENTIAL HEALTH EFFECTS

Inhalation:	High concentrations: May cause irritation to respiratory system.
Ingestions:	May be harmful if swallowed.
Skin:	Moderate skin irritation. Components of this product may be absorbed into the body through the skin
Eyes:	Mild eye irritation
Chronic Exposures:	May cause damage to the liver and kidneys
Target Organs:	Eye, skin, respiratory system, kidney, liver

Environmental exposure controls: Prevent product from entering drains

Engineering measures: Ensure adequate ventilation, especially in confined areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Dimethylsulfoxide	Glycerol	Tris base	ROX dye

Form	Colorless liquid	Liquid	Solid	Liquid
Odor	Faint odor	Faint odor	Odorless	Odorless
Solubility in water	Miscible	Miscible	Soluble	Soluble
Specific Gravity	1.1 at 20 deg C	1.4746	Not available	Not available
pH	Not available	Not available	Not available	Not available
Boiling Point	189°C(372°F)	290°C(554°F)	220°C@10mmHg	Not available
Melting Point	18°C(64°F)	-6.7°C(19.94°F)	>168.5oC	Not available
Flash Point	89°C(192°F) closed cap	Not available	Not available	Not available
Vapor Pressure	0.55mbar@20°C	0.003mbar@50°C	Not available	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	Prolong heating above 150°C(302°F)
Thermal Decomposition:	No decomposition if used according to specifications
Dangerous Reactions:	No dangerous reactions identified if used according to specification
Dangerous Products of Decomposition:	No dangerous decomposition products identified if used according to specification
Hazardous polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

RTECS Number: None known

Toxicity:

Chemical Name	LD50 (oral)	LD50 (dermal)	LC50 (inhalation)
Dimethylsulfoxide (DMSO)	14500 mg/kg (Rat)	40 g/kg (Rat)	No data available
Glycerol	12600 mg/kg (Rat)	10 g/kg (Rabbit)	570 mg/m ³ (Rat)
Tris Base	5900 mg/kg (Rat)	No data available	No data available
ROX dye	No data available	No data available	No data available

Health Hazards: May enter the body through inhalation, ingestion, and eye and skin contact.

Potential Hazards:

Eyes	Irritating to eyes.
Skin	Irritating to skin.
Inhalation	Irritating to respiratory system.

Carcinogenicity:

DMSO:	No data available
Glycerol:	Not listed as a carcinogen by ACGIH,IARC,NTP, or CA Prop 65
Tris base:	Not listed as a carcinogen by ACGIH,IARC,NTP, or CA Prop 65
ROX dye:	No data available

Mutagenicity:

DMSO:	Salmonella typhimurium assay (Ames test): negative (+/- activation), DMSO is used as a neutral solvent in the Ames mutagen test
Glycerol:	No data available
Tris base:	No data available
ROX dye:	No data available

Reproductive toxicity:

DMSO:	Not considered to be directly embryotoxic and has been shown to be a successful cryoprotectant for mammalian semen and embryos
Glycerol:	No data available
Tris base:	No data available

ROX dye: No data available

12. ECOLOGICAL INFORMATION

DMSO

Ecotoxicity effects: The LC50(96hrs) for ten species of fish range from 32500 to 43000ppm
Mobility: Miscible with water
Biodegradation: No information available.
Bioaccumulation: non- bioaccumulating since the log of the octanol/water partition coefficient is -2.03

ROX dye

Ecotoxicity effects: No information available
Mobility: No information available
Biodegradation: Inherently biodegradable
Bioaccumulation: Does not bioaccumulate

Glycerol, Tris base:

Ecotoxicity effects, Mobility, Biodegradation, Bioaccumulation: No data available

13. DISPOSAL CONSIDERATIONS

Consult local, state or national regulations for proper disposal.

14. TRANSPORT INFORMATION

Hazards Class: No information available
Identification Number: No information available
Packing Group: Not classified
Proper Shipping Name (Technical Name): Fast Probe Master Mix - ROX

15. REGULATIONS

European labeling in Accordance with EC Directives

Indication of danger

Xn – Harmful
Xi – Irritant

R-phrases

R22 – Harmful if swallowed
R36/38 – Irritating to eyes, respiratory system, and skin

S-phrases

None

16. OTHER INFORMATION

Disclaimer: 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.