



MATERIAL SAFETY DATA SHEET

Company	ELPIS-Biotech. Inc.
Address	123-12 Jeonglim-dong, Seo-gu, Daejeon, Korea
Emergency Telephone NO	+82-42-581-8448
Fax	+82-42-581-8449
e-mail address	elpis@elpisbio.com

SECTION 1. CHEMICAL INFORMATION

Product name PCR Marker 0.1-1kbp
Cat. No. EBM-1005
DNA in buffer solution; buffer solution. Volume of product package: 500ul.

Product Use : Laboratory Reagent. For R&D use only. Not for drug, household or other uses.

Manufacturer/ Supplier information

Supply company : ELPIS-Biotech. Inc.
Address : 123-12 Jeonglim-dong, Seo-gu, Daejeon, Korea
Information service or emergency call : +82-42-581-8448 (042-581-8448, Korea)
Department in charge : Research Department

SECTION 2. HAZARDOUS IDENTIFICATION



Primary routes of entry : Skin or eye contact from splashes. Inhalation of the vapor at room temperature is unlikely.

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

Evidence for reproductive toxicity, carcinogenicity and mutagenicity : No data available

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization : Mixtures

Description : Mixture of the substances listed below with nonhazardous additions.

Buffer's Components in Water:

Reagent	CAS#	Concentration, %
Tris-HCl	77-86-1	≤ 0.98
Sodium chloride	7647-14-5	≤ 0.176
Glycerol	56-81-5	≤ 20
EDTA	6381-92-6	≤ 0.04
Bromophenol blue	62625-28-9	0.01

Components:

Glycerol	CAS: 56-81-5	EI;ECS: 200-289-5	≤ 20 %
water	CAS: 7732-18-5	EI;ECS: 231-791-2	≤ 70 %

Other components are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

SECTION 4. FIRST AID MEASURES

After skin contact

Wash skin with water and soap and rinse thoroughly. Remove contaminated clothing. Get medical attention if irritating occurs.

After eye contact

Rinse opened eyes for several minutes under running water. Get medical attention if eyes become irritating.

After swallowing (ingestion)

Rinse mouth. Drink plenty of water. Get medical attention if irritating or symptoms occur

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing media

Water spray

Carbon dioxide, dry chemical powder or appropriate foam.

Special firefighting procedures

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosions hazards

Emit toxic fumes under fire conditions

Prevent contact with skin and eyes.

Flash Point : N/A

Autoignition Temp : N/A

Flammability : N/A

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Not required.

Environmental precautions

Do not allow entering sewers, surfaces or ground water.

Measures for cleaning / collecting

Collect spilled liquid with liquid-binding material or inert absorbent and place it in container for disposal. Wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Handling

No special measures necessary. Good laboratory technique should be used when handling.

Storage

Suitable: Keep tightly closed. No special measures necessary. Store at -20°C.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits Eye protection Skin protection

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace

Hygiene measures Breathing equipment

Avoid inhalation

Keep tightly closed store in a cool dry place. Freeze. Store at -20°C

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid.
Color	Bule
Odor	Odorless.
Melting point	20°C
Boiling point	182°C
Flash point	> 392 F, > 200°C
Explosive properties	No data available.
Vapor pressure	< 1 MMHG @ 20°C

SECTION 10. STABILITY AND REACTIVITY

Stability	Stable.
Hazardous polymerization	Will not occur
Materials to Avoid	Strong oxidizing agents, strong bases.
Hazardous Decomposition Products:	Carbon Monoxide, Carbon Dioxide
Protect from heat and moisture	

SECTION 11. TOXICOLOGICAL INFORMATION

Eye Contact:	Irritating to eyes
Skin Contact	Irritating to skin.
Multiple Routes	May be harmful by inhalation, ingestion, or skin absorption
Materials may be irritating to mucous membranes and upper respiratory tract.	
Preparations may cause allergic reactions in certain sensitive individuals.	
Chronic Effects	Target organs, Kidney

SECTION 12. ECOLOGICAL INFORMATION

Data not yet available

SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service to dispose of this material.

Observe all federal, state and local environmental regulations

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

SECTION 14. TRANSPORT INFORMATION

Contact ELPIS Biotech, Inc. Company for Transportation Information.

SECTION 15. REGULATORY INFORMATION

Korea regulatory information : None of the ingredients listed.

US CLASSIFICATION AND LABEL TEXT

US Statements: Caution: Avoid contact and inhalation.

UNITED STATES REGULATORY INFORMATION

SARA Listed : No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

Disclaimer : For R&D use only. Not for drug, household or other uses.

Warranty : The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide

SECTION 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.

ELPIS Biotech Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Date of preparation of the first version : 2011. 08. 10.

Revised frequency and Date of preparation of the latest version : 2013. 06. 24. (2nd version)