

# SAFETY DATA SHEET

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Identification of the substance/preparation

**Product name:** 1kb Plus DNA RTU Ladder (250bp-10 kb)

**Product code:** BR341-500

**Recommended use:** For laboratory use. Suitable for use as molecular weight standards for agarose gel electrophoresis.

### 1.2 Company/Undertaking identification

RAINBOW Technology, Inc.

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Taiwan, R.O.C.

**Tel:** +886 2 28118200

**Fax:** +886 2 28118628

**E-mail:** rainbow@rainbowbiotech.com.tw

### 1.3 Emergency telephone number

**Emergency telephone:** +886 2 28118200(08.30-17.30 TST)

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS) Classification to Regulation (EC) No 1272/2008

### 2.2 Label elements

**Symbol(s):** Void

**Signal Word:** Not dangerous

### 2.3 Other information

Hazards deriving from physical-chemical properties: The data available do not support any physical or chemical hazard.

Human health hazards: Inappropriate handling may cause formation of aerosols.

Inhalation of aerosols may cause allergic type reactions in sensitized individuals.

Prolonged skin contact may cause minor irritation.

\*Caution: Avoid inhalation, ingestion, and skin contacts.

Environmental hazards: The data available do not support any environmental hazard.

### **3. Composition/information on ingredient**

#### **3.1 Ingredients**

Chemical name	Concentration	EC No.	CAS No.	Classification
Glycerol	10-25%	200-289-5	56-81-5	Not classified

#### **3.2 Other components**

Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1272/2008/EC.

#### **3.3 Additional information**

For the wording of the listed risk phrases refer to section 16.

### **4. First aid measures**

#### **4.1 General information**

No special measures required.

#### **4.2 Description of first aid measures**

In case of ingestion: If swallowed, rinse mouth and throat thoroughly with water.

Consult a doctor in event of any complaints.

In case of inhalation: If inhaled, remove victim from area of exposure. If symptoms of irritation or respiratory allergy occur, consult a doctor.

In case of skin contact: Generally, the product does not irritate the skin. If symptoms of irritation after prolonged exposure occur, consult a doctor.

In case of eye contact: Wash out opened eyes with plenty of water for several minutes. Consult a doctor in event of any complaints.

### **5. Fire fighting measures**

#### **5.1 Suitable extinguishing agents**

Water spray, Carbon dioxide (CO<sub>2</sub>), dry chemical powder or appropriate foam.

#### **5.2 Not suitable extinguishing agents**

None.

#### **5.3 Special exposure hazards from decomposition products**

Not thoroughly investigated.

#### **5.4 Protective equipment**

Wear self-contained breathing apparatus and protective clothing.

### **6. Accidental release measures**

#### **6.1 Personal precautions**

Wear appropriate gloves (see Section 8), safety glasses to clean small releases/spillage. In case of vapor/aerosol formation, wear suitable respiratory protection means. Ventilate the area.

## 6.2 Environmental precautions

No special measures required.

## 6.3 Methods for cleaning up

Absorb spillages with liquid-binding material. Ventilate and wash the area after the spillage is completely removed.

## 6.4 Additional information

No dangerous substances are released.

# 7. Handling and storage

## 7.1 Handling

No further requirements. Use appropriate personal protection measures (see Section 8). Avoid any contact with the liquid. Avoid the formation of aerosols. Ventilate area.

## 7.2 Storage

Store at - 20°C. No other specific requirements relating to the preparation.

# 8. Exposure controls/personal protection

## 8.1 Control parameters

Chemical name	CAS No.	Exposure limits
Glycerol	56-81-5	TWA: 10 mg/m <sup>3</sup>

## 8.2 Exposure controls

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

## 8.3 Personal protection

**Respiratory protection:** No special measures required.

**Hand protection:** Wear rubber gloves. No special requirements to rubber.

**Eye protection:** Safety glasses (goggles) are recommended during ordinary operations with the preparation.

**Skin protection:** The usual precautionary measures accepted in research laboratories, e.g. protective clothes (gowns). No specific requirements.

## **9. Physical and chemical properties**

### **9.1 Information on basic physical and chemical**

**properties Appearance:** Liquid.

**Color:** Blue.

**Odor:** Odorless.

**pH-value at 25°C:** 8.0.

**Boiling point:** 100°C.

**Flash Point:** Not applicable.

**Flammability/autoflammability:** The preparation is not flammable/self-igniting.

**Explosive properties:** The preparation does not possess explosive properties.

**Oxidizing properties:** Not applicable.

**Vapor pressure:** Not applicable.

**Relative density at 20°C:**  $\sim 1 \text{ g/cm}^3$ .

**Solubility in/miscibility with water:** Fully miscible.

**Fat solubility:** Not applicable.

**Vapor density:** Not applicable.

**Evaporation rate:** Not applicable.

**Conductivity:** Not applicable.

**Viscosity:** Not viscous.

### **9.2 Other information**

No further relevant information available.

## **10. Stability and reactivity**

### **10.1 Stability**

Stable under storage conditions (see section 7).

### **10.2 Reactivity**

No information available.

### **10.3 Possibility of hazardous reactions**

No dangerous reactions known.

### **10.4 Conditions to avoid**

No conditions which may cause dangerous reactions.

### **10.5 Incompatible materials**

No in particular.

#### 10.6 Hazardous decomposition products

No dangerous decomposition products known.

### 11. Toxicological information

#### 11.1 Information on toxicology effects

**Acute toxicity:** Not hazardous.

**Inhalation:** Inhalation of aerosols may cause allergic type reactions in sensitized individuals.

**Ingestion:** Repeated ingestion or excessive dosage may cause irritation of the gastrointestinal tract.

**Skin and eye contact:** Generally, the product does not irritate the skin and eyes. Prolonged skin or eye contact may cause minor irritation.

Chemical name	LD50 Oral	LD50 Dermal
Glycerol	12600 mg/kg (Rat)	21900 mg/kg (Rat)

**Chronic toxicity:** Product does not present a chronic toxicity hazard based on known or supplied information.

**Carcinogenic effects:** Product does not present a carcinogenic effects based on known or supplied information.

**Mutagenic effects:** Product does not present a c mutagenic effects based on known or supplied information.

**Reproductive toxicity:** Product does not present a reproductive toxicity hazard based on known or supplied information.

**Sensitization:** Product does not present a sensitization hazard based on known or supplied information.

**Target organ effects:** Product does not present a target organ effects based on known or supplied information.

### 12. Ecological information

#### 12.1 Ecotoxicity

The preparation is considered not dangerous to the environment with respect to mobility, persistence and degradability, bioaccumulation, aquatic toxicity and other data relating to ecotoxicity.

#### 12.2 Persistence and degradability

The preparation is readily biodegradable.

#### 12.3 Bioaccumulative potential

It is considered that the preparation does not accumulate in biota, and does not

pass through the food chain.

#### **12.4 Other adverse effects**

Not applicable.

### **13. Disposal consideration**

#### **13.1 Waste treatment methods**

**Waste from residues / unused products:** Dispose of in accordance with local regulation.

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

### **14. Transport information**

**IMDG/IMO:** Non-hazardous for sea freight.

**RID:** Non-hazardous for rail transport.

**ARD:** Non-hazardous for road transport.

**ICAO/IATA:** Non-hazardous for air transport.

### **15. Regulatory information**

#### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No information available.

#### **15.2 Chemical safety assessment**

No information available.

#### **15.3 Regulatory information**

**US :**

**Labelling according to US Regulations:** Caution: Avoid contact and inhalation. **US Regulatory information:** SARA LISTED: No.

**EU :**

**Labelling according to EU Guidelines:** The preparation is not dangerous within the meaning of Directives 1272/2008/EC, and is not labelled with danger symbols or indications of danger

**Canada :**

**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.

## **16. Other information**

### **16.1 Full text of R-phrases referred to under sections 3**

R21 : Harmful in contact with skin.

R22 : Harmful if swallowed.

R36 : Irritating to eyes.

R38 : Irritating to skin.

### **16.2 Full text of physical and health hazards referred to under sections 3**

H302 : Harmful if swallowed.

H312 : Harmful in contact with skin.

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. RAINBOW shall not be held liable for any damage resulting from handling or from contact with the above product.