

**Material Safety Data Sheet**

Printed Date: 07/08/2007

Reviewed on: 16/07/2007  
Regulation: 91/155/EEC**Section 1 - Product and Company Information**

Product Name PROTEIN DETECTION KIT FOR ELECTROPHORESIS GELS:  
PEACE OF MIND (2 IN 1)

Product Number ENZ0003

Company Name Enzolve Technologies Limited

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**Section 2 – Composition/Information on Ingredients**

Product Name	CAS no.	EC no.	EC Index no.
PROTEIN DETECTION KIT FOR ELECTROPHORESIS GELS: PEACE OF MIND (2 IN 1)	None	None	None

Information on dangerous components of the product

Ingredient Name/Common Synonyms	Percent	CAS no.	EC no.	Symbol	EC Index no.
<b>METHYL ALCOHOL</b> Methanol, Methylol, Monohydroxymethane, Methyl Hydrate, Methyl Hydroxide, Wood Alcohol, Wood Spirit,	15-20	67-56-1	200-659-6	F	603-001-00-X
<b>ACETIC ACID</b> Acetic Acid Glacial, Ethanoic Acid, Ethylic Acid, Vinegar Acid, Methanecarboxylic Acid	5-10	64-19-7	200-580-7	C	607-002-00-6
<b>Brilliant Blue R</b> Coomassie Brilliant Blue R, Acid Blue 83, Brilliant Indocyanin 6B	0.01-0.02	6104-59-2	228-060-5	-	None

**Section 3 - Hazards Identification**

SPECIAL INDICATION OF HAZARDS

Flammable,  
Corrosive,  
Irritating to eyes and skin,  
Toxic by inhalation, in contact with skin and if swallowed.

#### **Section 4 - First Aid Measures**

**IF INHALED:**

remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**IN CASE OF SKIN CONTACT:**

immediately wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes.

**IN CASE OF EYE CONTACT:**

immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.

**IF SWALLOWED:**

wash out mouth with water provided person is conscious. Call a physician.

#### **Section 5 - Fire Fighting Measures**

**SUITABLE EXTINGUISHING MEDIA**

For small fires, use media such as dry chemical, carbon dioxide or appropriate foam. For large fires, apply water from as far as possible. Use very large quantities of water applied as a mist or spray. Cool all affected containers with flooding quantities of water.

**SPECIAL RISKS**

Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions. Vapor may travel considerable distance to source of ignition and flash back.

Explosion Hazards: Container explosion may occur under fire conditions.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS**

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

#### **Section 6 - Accidental Release Measures**

**PERSONAL PRECAUTION(S) IN CASE OF LEAK OR SPILL:**

Evacuate area and shut off all sources of ignition. Wear self-contained breathing apparatus, chemical safety goggles, rubber boots and heavy rubber gloves.

**METHODS FOR CLEANING UP**

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

#### **Section 7 - Handling and Storage**

**HANDLING**

Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**STORAGE**

Keep product containers closed and refrigerated (2 - 8°C). Keep away from heat, sparks, and open fire.

#### **Section 8 - Exposure Controls / Personal Protection**

**SAFETY EQUIPMENT AND PERSONAL PROTECTION**

Safety shower and eye bath.

Use nonsparking tools and mechanical exhaust.

Use in a chemical fume hood.

Avoid prolonged or repeated exposure.

Wash thoroughly after handling.

Use respirators and components approved under appropriate government standards.

Use compatible chemical-resistant gloves and safety goggles.

## **Section 9 - Physical and Chemical Properties**

<b>Property</b>	<b>Value</b>
Physical State	Liquid
Solubility	N/A
pH	N/A
Initial boiling point	64-65°C
Melting point	N/A
Flash point	43-48°C
Flammability	N/A
Autoignition temperature	N/A
Oxidising properties	N/A
Explosive properties	N/A
Explosion limit	N/A
Decomposition temperature	N/A

## **Section 10 - Stability and Reactivity**

### STABILITY

Stable.

### INCOMPATIBILITIES

Oxidizing agents, Reducing agents, Alkali metals, Peroxides, Soluble carbonates and phosphates, Hydroxides, Oxides, Permanganates, Amines, Alcohols, Acid chlorides.

### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides.

### HAZARDOUS POLYMERIZATION

Will not occur

## **Section 11 - Toxicological Information**

### SYMPTOMS OF EXPOSURE

Symptoms of exposure may include burning sensation, coughing, wheezing, shortness of breath, laryngitis, headache, nausea and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: haematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, haematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness. Methanol is toxic if inhaled, swallowed or absorbed through skin. It causes irritation to eye, mucous membranes and upper respiratory tract. High concentrations may be fatal or cause blindness if swallowed. Ingestion can cause

nausea, headache, vomiting, gastrointestinal disturbances, dizziness, weakness, drowsiness, unconsciousness and convulsions. Can cause central nervous system depression and damage to the heart.

#### ROUTE OF EXPOSURE

Skin Contact – Causes skin irritation.  
Skin Absorption – Toxic if absorbed through skin.  
Eye Contact – Causes eye irritation.  
Inhalation – Material may be irritating to mucous membranes and upper respiratory tract.  
Ingestion – Toxic if swallowed.

#### TARGET ORGANS

Central Nervous System,  
Liver,  
Heart,  
Kidneys,  
Teeth,  
Eyes.

#### CARCINOGENIC EFFECTS

The product components are not classified as carcinogenic based on their IARC, ACGIH, NTP, or EPA classification. However, laboratory experiments with high concentrations of sodium azide have shown some mutagenic effects.

### **Section 12 - Ecological Information**

Data not yet available.

### **Section 13 - Disposal Considerations**

#### PRODUCT DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local environmental regulations.

### **Section 14 - Transport Information**

#### RID/ADR

UN number: 1992  
Class: 3  
Packaging Group: III  
Shipping Name: Methanol solution

#### IMDG

UN number: 1992  
Class: 3  
Packaging Group: III  
Shipping Name: Methanol solution  
Marine Pollutant: No  
Severe Marine Pollutant: No

#### IATA

UN number: 1992  
Class: 3  
Packaging Group: III  
Proper Shipping Name: Methanol solution  
Inhalation Packing Group I: No

**Section 15 - Regulatory Information**

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xi  
Irritant.

R-PHRASES: 10-23/24/25-36/38

Flammable. Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin.

S-PHRASES: 16-24/25-26-37/39

Keep away from sources of ignition - no smoking. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.

**Section 16 - Other Information**

WARRANTY

The above information is believed to be correct but does not claim to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Enzolve Technologies Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.

DISCLAIMER

This product is for R&D use only.