

## MATERIAL SAFETY DATA SHEET

Date Printed: October 29, 2010

### Section 1 - Product and Company Information

Product Name: Markit-M Bradykinin  
Brand: DS Pharma Biomedical Co.Ltd.  
Company: DS Pharma Biomedical Co.Ltd.  
Address: 33-94 Enoki, Suita, Osaka 564-0053, JAPAN  
Phone: 06-6386-2164  
Fax: 06-6337-1606

### Section 2 - Composition/ Information on ingredients

- (1) Standard : Bradykinin
- (2) Buffer solution A : Phosphate buffer solution
- (3) Deproteinizing reagent : Trichloroacetic acid 20% (w/v) solution
- (4) Buffer solution B : Tris buffer solution
- (5) Bradykinin antibody : Anti-Bradykinin antibody (rabbit)
- (6) Antibody-coated wells : Anti-rabbit IgG antibody (goat) coated wells
- (7) Wash buffer concentrate : Phosphate buffer solution
- (8) Bradykinin enzyme conjugate : Peroxidase-labeled Bradykinin
- (9) Substrate tablet : o-Phenylenediamine dihydrochloride (OPD)
- (10) Substrate diluent buffer : Phosphate buffer solution contains 0.065% Hydrogen peroxide
- (11) Stop reagent : Diluted sulfuric acid ( $\leq 5\%$ )

(9) Substrate tablet

Chemical Substance Name : O-phenylenediamine dihydrochloride  
Content : 20.6%  
CAS No. : 615-28-1  
Industrial Safety and Health Law (Japan): Not identified  
Poisonous and Deleterious Substances Control Law (Japan): Listed, except for the mixture. Not applied to the product  
TSCA inventory : Listed, 1,2-Benzenediamine, hydrochloride

(10) Substrate diluent buffer

Chemical Substance Name : Hydrogen peroxide  
Content : less than 0.065%  
CAS No. : 7722-84-1  
Industrial Safety and Health Law (Japan): Labeling (> 1%), MSDS required (> 0.1%). Not applied to the product  
Poisonous and Deleterious Substances Control Law (Japan): Listed, except for the mixture containing less than 6%. Not applied to the product  
TSCA inventory : Listed, Hydrogen peroxide

- (11) Stop solution contains sulfuric acid  
Chemical Substance Name : Sulfuric acid  
Content : less than 5%  
CAS No. : 7664-93-9  
Industrial Safety and Health Law (Japan) : MSDS required(>1%)  
Poisonous and Deleterious Substances Control Law (Japan) : Listed, except  
for the mixture containing less than 10%. Not applied to  
the product  
TSCA inventory : Listed, Sulfuric acid

### Section 3 - Hazards Identification

The product has not been classified according to the legislation in force.

May irritate eyes and skin  
May harmful if inhaled and ingested.

### Section 4 - First Aid Measures

General advise :

Wash off immediately with soap and plenty of water. Use personal protective equipment.

Ingestion:

Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable, take to a hospital.

Inhalation:

Move injured person into fresh air and keep person calm under observation. If uncomfortable, take to a hospital.

Eye contact:

Remove any contact lenses at once. Immediately flush with plenty of water for up to 15 minutes. If irritation persists, continue rinsing and consult a physician.

Skin contact:

Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation persists consult a physician.

### Section 5 - Fire Fighting Measures

During fire, gases hazardous to health may be formed. Extinguish with Carbon dioxide, dry chemical powder, foam or water. Use protective equipment appropriate for surrounding materials.

### Section 6 - Accidental Release Measures

Avoid inhalation and contact with skin and eyes, flush contaminated area with plenty of water.

### Section 7 - Handling and Storage

Safe handling advise: Avoid inhalation and contact with skin and eyes.

Handle material with suitable protection.

Storage conditions : Store at 2-10°C

### Section 8 - Exposure Controls / Personal Protection

Engineering measures : Provide adequate ventilation. Safety shower and eye bath.

Personal protection : Impervious gloves, Safety glasses, Protective clothes

### Section 9 - Physical/Chemical Properties

Appearance : (1), (5), (8); Lyophilized  
(2)-(4), (6), (7), (10), (11); Liquid  
(6); Microplate

pH : Not available

Boiling point : Not available

Explosive limit : Not available

Vapor pressure : Not available

Specific gravity : Not available

### Section 10 - Stability and Reactivity

Stability : Stable under the prescribed storage conditions.

Conditions to avoid : Strong oxidizers, Sun light

Hazardous Polymerization: Will not occur

### Section 11 - Toxicological Information

Not available as the mixture

[1] as O-phenylenediamine dihydrochloride

Environmental Toxicity : Not available as the mixture

Toxicity to humans: Not available as the mixture

[2] as Hydrogen peroxide

Environmental Toxicity : Not available as the mixture

Toxicity to humans: Not available as the mixture

Additional information

ACGIH : Suspected Human Carcinogen (A3)

[3] as Sulfuric acid

Environmental Toxicity : Not available

Toxicity to humans

May cause skin irritation.

May be harmful if absorbed through the skin.

May cause eye irritation.

May irritate mucous membranes and upper respiratory tract.

Additional information

ACGIH : Suspected Human Carcinogen (A2)

Section 12 - Transport Information

Air transportation (ICAO/IATA): As a mixture, the substance is subjected to no limitation.

Section 13 - Other Information

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

The above information is believed to be correct to be the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide.