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## MATERIAL SAFETY DATA SHEET

EMERGENCY # FOR NATIONAL RESPONSE CENTER **(800) 424-8802**

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SECTION 1. CHEMICAL IDENTIFICATION Product Name: **Nitric Oxide Synthase (NOS) Detection Kit**

Section 2 - Composition/Information on Ingredient

Part# 4006: 4,5-DIAMINOFLUORESCEIN ACETATE, 5MM SOLUTION\*IN DMSO

The hazards identified with this product are those associated with the following component(s):

Substance Name : DIMETHYL SULFOXIDE CAS # 67-68-5 >= 99%.

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Irritant.

Irritating to eyes, respiratory system and skin. Combustible. Readily absorbed through skin. Target organ(s): Eyes. Skin.

HMIS RATING

HEALTH: 0\*

FLAMMABILITY: 2

REACTIVITY: 0

NFPA RATING

HEALTH: 0

FLAMMABILITY: 2

REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

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

INHALATION EXPOSURE

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

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Combustible liquid. Emits toxic fumes under

fire conditions.

#### Section 6 - Accidental Release Measures

##### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

##### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, 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.

##### ENVIRONMENTAL PRECAUTION(S)

Avoid contaminating sewers and waterways with this material.

#### Section 7 - Handling and Storage

##### HANDLING

User Exposure: Do not breathe vapor. Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body. Avoid prolonged or repeated exposure. Suitable: Store under inert gas. Keep tightly closed. Keep away from heat and open flame.

Store at 2-8°C

##### SPECIAL REQUIREMENTS

Store under inert gas. Hygroscopic.

#### Section 8 - Exposure Controls / PPE

##### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

##### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Skin-Specific: Chemical resistant apron.

##### GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

#### Section 9 - Physical/Chemical Properties

Appearance Physical State: Liquid

Property Value At Temperature or Pressure

pH N/A

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure N/A

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density N/A

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Surface Tension N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point N/A

Explosion Limits N/A

Flammability N/A

Autoignition Temp N/A  
Refractive Index N/A  
Optical Rotation N/A  
Miscellaneous Data N/A  
Solubility N/A  
N/A = not available

#### Section 10 - Stability and Reactivity

##### STABILITY

Stable: Stable.

Conditions to Avoid: Exposure to moisture may affect product quality. Materials to Avoid: Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents.

##### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides.

##### HAZARDOUS EXOTHERMIC REACTIONS

Hazardous Exothermic Reactions: Methyl sulfoxide (DMSO) undergoes a violent exothermic reaction on mixing with copper wool and trichloroacetic acid. On mixing with potassium permanganate it will flash instantaneously. It reacts violently with: acid halides, cyanuric chloride, silicon tetrachloride, phosphorus trichloride and trioxide, thionyl chloride, magnesium perchlorate, silver fluoride, methyl bromide, iodine pentafluoride, nitrogen periodate, diborane, sodium hydride, and perchloric and periodic acids. When heated above its boiling point methyl sulfoxide degrades giving off formaldehyde, methyl mercaptan, and sulfur dioxide.

##### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

#### Section 11 - Toxicological Information

##### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: Readily absorbed through skin. May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

##### TARGET ORGAN(S) OR SYSTEM(S)

Eyes. Skin.

##### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. CONDITIONS AGGRAVATED BY EXPOSURE  
Avoid contact with DMSO solutions containing toxic materials or materials with unknown toxicological properties. Dimethyl sulfoxide is readily absorbed through skin and may carry such materials into the body.

#### Section 12 - Disposal Considerations

##### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

##### DISCLAIMER

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

##### WARRANTY

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