1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code 8201028
Preparation 3,3'-diaminobenzidine (DAB) 0.23 M

Company/Undertaking Identification
MitoSciences Inc.
1850 Millrace Drive Suite 3A
Eugene, OR 97403
Phone: (541) 284-1800
Fax: (541) 284-1801

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3'-diaminobenzidine</td>
<td>0.23 M</td>
</tr>
<tr>
<td>CAS# 91-95-2</td>
<td></td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
H341 Suspected of causing genetic defects
H350 May cause cancer

OSHA Hazards
Carcinogen, Mutagen

HMIS Classification
Health Hazard: 0
Flammability: 0
Physical hazard: 0

Principle Routes of Exposure / Potential Health effects

Eyes: May cause eye irritation
Skin: May be harmful if absorbed through skin. May cause skin irritation
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation
Ingestion: May be harmful if swallowed

4. FIRST AID MEASURES

Skin contact: Wash off immediately with soap and water
Eye contact: Rinse thoroughly with plenty of water, also under the eyelids
Ingestion: Never give anything by mouth to an unconscious person
Inhalation: Move to fresh air
Notes to physician: Treat symptomatically
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Dry chemical

Special protective equipment for firefighters
Wear self-contained breathing apparatus and protective suit

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas

Environmental precaution
Prevent further leakage or spillage if safe to do so. Do not let product enter drains

Methods for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal

7. HANDLING AND STORAGE

Handling
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection

Storage
Recommended storage temperature: -20°C or -80°C (long-term), light-sensitive

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Exposure limits

Engineering measures
Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Respiratory protection
In case of insufficient ventilation wear suitable respiratory equipment

Hand protection
Protective gloves

Eye protection
Safety glasses with side-shields

Skin and body protection
Lightweight protective clothing

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls
Prevent product from entering drains

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information
Form
Liquid
Color
Dark brown
Odor
Sulphurous

Important Health Safety and Environmental Information
Boiling point/range
°C No data available
°F No data available
Melting point/range
172-174°C
341-345°F
Flash point
°C No data available
°F No data available
Autoignition temperature
Does not present an explosion hazard
Oxidizing properties
No information available
Water solubility
Fully miscible
10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions

Materials to avoid
Strong oxidizing agent

Hazardous decomposition
Hazardous decomposition products formed under fire conditions.
Carbon oxides, nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - mouse - 1,834 mg/kg

Irritation and corrosion
No data available

Sensitisation
No data available

Germ cell mutagenicity
In vitro tests showed mutagenic effect

Carcinogenicity
rat - Oral

Additional Information
RTECS: DV875000

12. ECOLOGICAL INFORMATION

Ecotoxicity effects
No information available

Mobility
No information available

Biodegradation
No information available

Bioaccumulation
No information available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations

14. TRANSPORT INFORMATION

IATA
Proper shipping name
Not classified as dangerous in the meaning of transport regulations

Hazard Class
No information available

Subsidiary Class
No information available

Packing group
No information available

UN-No
No information available

15. REGULATORY INFORMATION

International Inventories

U.S. Federal Regulations

SARA 313
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contains HAPs

U.S. State Regulations
California Proposition 65
This product does not contain chemicals listed under Proposition 65

WHMIS hazard class:
Non-controlled

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. OTHER INFORMATION

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

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End of Safety Data Sheet