Safety Data Sheet (SDS)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill, at their own discretion and risk.

Section 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product Name: 3-Deoxyglucosone Detection Reagents
Product Code: D536
CAS Number: -
EC Number: -

1.2 Details of the supplier of the safety data sheet

Company: Dojindo Laboratories
Address: Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan
Telephone: +81-96-286-1515
Fax: +81-96-286-1525
Emergency phone number: +81-96-286-1515

1.3 Product use

For research use only.

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
- Acute toxicity, Category 4 (Oral)
- Serious eye damage/eye irritation, Category 2
- Skin corrosion/irritation, Category 2
- Specific target organ toxicity – single exposure, Category 3

2.2 Label elements

Labeling according Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Pictogram:

Signal word: Warning

Hazard statement(s):
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement(s):
P261 Avoid breathing dust/fume/gas/mist/ vapours/spray.
P264 Wash /hands/face/forearms/clothing thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/ face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
**Section 3. COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 **Product name:** 3-Deoxyglucosone Detection Reagents

   **DAN**

   **Concentration:** \( \leq 100 \% \)

   **Formula:** \( C_{10}H_{10}N_2 \)

   **Molecular weight:** 158.20

   **3-DG/DAN adduct**

   **Concentration:** \( \leq 100 \% \)

**Section 4. FIRST AID MEASURES**

4.1 **Description of first aid measures**

   **If inhaled:** If breathed in, move into fresh air. Seek medical advice if discomfort occurs. If not breathing, give artificial respiration. Call a physician.

   **If swallowed:** Do not induce vomiting. Wash out mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention.

   **In case of skin contact:** Wash off with plenty of water. Remove contaminated clothing and launder before reuse.

   **In case of eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation occurs.

4.2 **Most important symptoms and effects, both acute and delayed**

   No information available.

4.3 **Indication of any immediate medical attention and special treatment needed**

   No information available.

**Section 5. FIRE-FIGHTING MEASURES**

5.1 **Extinguishing media**

   Use extinguishing media appropriate for the surrounding fire.

5.2 **Special hazards arising from the substance or mixture**

   May emit toxic fumes under fire conditions.

5.3 **Special protective equipment for firefighters**

   Wear self-contained breathing apparatus and full protective clothing if necessary.

**Section 6. ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**

   Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Avoid formation of dust. Avoid exposure to dust, fumes, mists, or gases. Avoid contact with skin and clothing.

6.2 **Environmental precautions**

   Prevent further leakage. Prevent contamination of drains with product.

6.3 **Methods and materials for containment and cleaning up**

   Pick up and collect product in suitable container for disposal.

**Section 7. HANDLING AND STORAGE**

7.1 **Precautions for safe handling**

   Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Avoid formation of dust. Avoid exposure to dust, fumes, mists, or gases. Avoid contact with skin and clothing.
7.2 **Conditions for safe storage, including any incompatibilities**
Keep tightly closed. Protect from light.
Store in a deep freeze at -20°C, dark and dry place.

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**Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**
Contains no substances with occupational exposure limit values.

**8.2 Exposure controls**

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

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Wash hands, forearms and face after handing.

**Personal protective equipment**

**Eye/face protection:** Wear safety glasses with side-shields conforming to European Standard EN166.

**Hand protection:** Wear protective gloves conforming to EU Directive 89/686/EEC and European Standard EN374. Gloves must be inspected prior to use. Avoid skin contact with product when remove gloves. Dispose of contaminated gloves safely after use.

**Skin and body protection:** Wear laboratory coat or impervious clothing. Choose appropriate body protection according to the amount and concentration of the substance at the work place.

**Respiratory protection:** Wear suitable respiratory equipment in case of inadequate ventilation.

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**Section 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance: DAN</td>
<td>White to pale yellowish brown powder</td>
</tr>
<tr>
<td>3-DG/DAN adduct</td>
<td>Yellow powder or solid</td>
</tr>
<tr>
<td>Odor: DAN</td>
<td>Odorless</td>
</tr>
<tr>
<td>3-DG/DAN adduct</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper / lower flammability or explosive limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density:</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies):</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol / water:</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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**Section 10. STABILITY AND REACTIVITY**

**Stability and reactivity**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity:</td>
<td>Stable</td>
</tr>
<tr>
<td>Chemical stability:</td>
<td>Stable at a deep freeze at -20°C, dark and dry place.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions:</td>
<td>No data available</td>
</tr>
<tr>
<td>Conditions to avoid:</td>
<td>Heat, sunlight, high temperature</td>
</tr>
<tr>
<td>Incompatible materials:</td>
<td>Strong oxidizing agents, strong acids and bases</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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**Section 11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity:</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion / irritation:</td>
<td>No data available</td>
</tr>
</tbody>
</table>
c) Serious eye damage/eye irritation: No data available

d) Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as a possible, probable or confirmed human carcinogen by IARC.

e) Reproductive toxicity: No data available

f) STOT - SE: No data available

g) STOT - RE: No data available

h) Aspiration hazard: No data available

11.2 Potential health effects

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

11.3 Additional Information
No additional information is available

Section 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available

Section 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Contact a licensed professional waste disposal service to dispose of this material. Dispose of in accordance with local regulations.

Contaminated packaging
Dispose of as unused product. Do not reuse empty containers.

Section 14. TRANSPORT INFORMATION

14.1 UN number, Transport hazard class(es) and Packaging group

<table>
<thead>
<tr>
<th>UN number</th>
<th>Transport hazard class(es)</th>
<th>Packaging group</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR/RID:</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IMDG:</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IATA:</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

14.2 UN proper shipping name

| ADR/RID: | - |
| IMDG:    | - |
| IATA:    | - |

14.3 Environmental hazards

| ADR/RID: | No |
| IMDG:    | No |
| IATA:    | No |

Section 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

Section 16. OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE: Specific Target Organ Toxicity - Single Exposure
STOT-RE: Specific Target Organ Toxicity - Repeated Exposure
PBT: Persistent Bioaccumulative and Toxic
vPvB: very Persistent very Bioaccumulative and toxic
ADR: European Agreement concerning the international carriage of
      Dangerous goods by Road
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS:</td>
<td>Chemical Abstracts Service</td>
</tr>
<tr>
<td>IARC:</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IATA:</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IMDG:</td>
<td>International Maritime Code for Dangerous Goods</td>
</tr>
<tr>
<td>REACH:</td>
<td>Registration, Evaluation, Authorization and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID:</td>
<td>Regulations concerning the International transport of Dangerous goods by rail</td>
</tr>
</tbody>
</table>