Safety Data Sheet

1. Identification of the Substance/Mixture and the Supplier

Supplier: National Institute of Advanced Industrial Science and Technology (AIST)
Address: 1-3-1, Kasumigaseki, Chiyoda-ku, Tokyo, Japan
Office in Charge: Reference Materials Office, Center for Quality Management of Metrology, National Metrology Institute of Japan
Person in Charge: Certified Reference Material Staff
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Emergency Contact: Same as above

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Revised on: March 31, 2017
ID Number: 7541002

Identity of Substance/Mixture: Certified reference material NMIJ CRM 7541-b

134Cs and 137Cs in Brown Rice

Recommended Use of the Chemical and Restriction on Use:

This certified reference material is intended for use in controlling the precision of analysis or confirming the validity of analytical methods or instruments of 134Cs, 137Cs in brown rice or rice. Do not use this material for other purposes than testing and research.

2. Hazards Identification

GHS classification: Classification not possible
GHS labeling: Classification not possible
Element
Signal word: -
Hazard and toxicity: -
Information
Cautionary statement: [Safety measures]
Do not use for any purpose other than tests and research.
Do not eat, drink, or smoke when using this product.
Wear protective gloves and glasses.
Do not let the product come in contact with eyes, skin, or clothing.
Avoid discharge to environment.
After handling the product, wash hands well.

[Emergency measure]
Ingestion: Rinse mouth well with water.
Eye contact: Wash eyes with plenty of clean water. Seek medical attention if necessary.

[Storage]
Keep out of sunlight at a clean place at room temperature (5 to 35 ℃).
[Disposal]
Dispose the content and container in accordance with national and local laws and regulations.

Classification is impossible or not applicable for hazards not mentioned above.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substance or mixture</th>
<th>Single substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Brown rice</td>
</tr>
<tr>
<td>Synonym</td>
<td>-</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>-</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>-</td>
</tr>
<tr>
<td>CAS number</td>
<td>-</td>
</tr>
<tr>
<td>Content</td>
<td>100 %</td>
</tr>
<tr>
<td>Reference Number in Gazetted List in Japan</td>
<td>Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.</td>
</tr>
<tr>
<td></td>
<td>Industrial Safety and Health Act</td>
</tr>
</tbody>
</table>

4. First-aid Measures

Eye contact: Wash eyes with plenty of clean water. Seek medical attention.
Skin contact: -
Inhalation: -
Ingestion: Rinse mouth well with water. Contact a physician.
Estimated acute and late symptom: -
Protection of first-aiders: Use personal protective equipment.

5. Fire-fighting Measures

Extinguishing media: Use extinguishing media for peripheral fire.
Specific hazards with regard to fire-fighting: None
Specific methods of fire-fighting: Eliminate the origin of fire and put the fire out with extinguishing media. If possible, move containers to a safe place. If not, cool the peripheral areas with water spray.
Protection for firefighters: Work from the windward side to prevent the inhalation of toxic gas. Use fire-prevention clothing, fireproof clothing, fire-protection clothing, respirator, circulating oxygen breathing apparatus, rubber gloves, and rubber boots.

6. Accidental Release Measures

Personal precautions: Promptly remove all potential ignition sources at peripheral areas. In case of ignition, prepare the equipment for fire-fighting.
Protective equipment and emergency measures: When accidental release takes place indoors, thoroughly clear the air until the emergency measures are complete. Before the operation, wear appropriate protective equipment to protect skin from droplets and to prevent inhalation of dust and gas.

Environmental precautions: -

Recovery and neutralization: Collect in an empty container as much as possible.

Prevention of second accident: -

7. Handling and Storage
Handling
- Do not shake to mix. Do not vibrate or give impact.
- The product is distributed in a sealed U8 container. Use the product so provided and do not pour it into another container.
- Do not contaminate the U8 container surface with radioactive substances.
- If cracked brown rice grains or discolored grains are included, do not use the product.
- This product cannot be used for calibration of measuring devices.
- Do not use for any purpose other than tests and research.
- Do not use for food.
- Avoid rough handling such as turning over, dropping, giving a shock to or dragging containers.
- Make a place handling this reference material a restricted area to keep out unauthorized people.

Storage
- Keep out of sunlight at a clean site at room temperature (5–35 °C).
- The product is affected by the surrounding humidity variations even when packed in a U8 container. Storage is recommended at 60–75 % RH.
- If this CRM is stored without original aluminum laminated plastic bag, it is recommended to store this CRM in clean and dry place such as a desiccator with saturated solution of NaCl at normal room temperature.

Safe packaging: Polypropylene U8 container

8. Exposure Controls/Personal Protection
Standard control concentration
N/A

Threshold limit values (material name)
- ACGIH TLV-TWA: N/A
- Value recommended by Japanese Society of Occupational Health: N/A
- OSHA PEL TWA: N/A

Engineering controls
- When dust is generated, seal the source and provide local exhaust ventilation.
Protective equipment
  • Dust mask, protective gloves, and safety glasses

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance, etc.</td>
<td>Grain</td>
</tr>
<tr>
<td>Color</td>
<td>Brown</td>
</tr>
<tr>
<td>Odor</td>
<td>No data</td>
</tr>
<tr>
<td>pH</td>
<td>No data</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data</td>
</tr>
<tr>
<td>Flashing point</td>
<td>No data</td>
</tr>
<tr>
<td>Explosive range</td>
<td>No data</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data</td>
</tr>
<tr>
<td>Relative vapor density (Air=1)</td>
<td>No data</td>
</tr>
<tr>
<td>Specific gravity or bulk specific gravity</td>
<td>No data</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data</td>
</tr>
<tr>
<td>Octanol/water partition coefficient (Log Po/w)</td>
<td>No data</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

◇ Stability
  • Stable under normal conditions

◇ Reactivity
  • No data

◇ Conditions to avoid
  • Sunlight, moisture

◇ Hazardous decomposition products
  • No data

11. Toxicological Information

No data

12. Ecological Information

Degradability/Concentration
  • No data

Bioaccumulation
  • No data

Ecotoxicity
  • No data

13. Disposal Considerations
• Comply with laws related to waste disposal and cleaning.
• Entrust disposal of residual waste to a professional waste disposal company licensed by prefectural governor.

14. Transport Information

UN Dangerous Goods Number : Not applicable
UN Classification : Not applicable
Product name : -

Packing group : -

ICAO/IATA : -

Marine pollutant : -
Matters to be attended to : Do not turn over.
Avoid direct sunlight, prevent turnover or falling of the container, and transport carefully.

15. Regulatory Information
• No applicable laws and regulations

16. Other Information

Other
The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.