

Safety Data Sheet



1. Identification of the Substance/Mixture and the Supplier

Supplier : National Institute of Advanced Industrial Science and Technology (AIST)
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Identity of Substance/Mixture : Certified reference material: NMIJ CRM 6205-a Deoxyribonucleic Acid(DNA) Solutions for Quantitative Analysis (1 ng/ mL, 600 bp)
 Recommended Use of the Chemical and Restriction on Use : This CRM consists of two solutions of deoxyribonucleic acid (DNA) having different sequences. This CRM is principally intended to be used in assigning the value of DNA samples for the evaluation and control of the precision of DNA analytical methods such as DNA microarrays (DNA chips) and quantitative polymerase chain reactions (qPCR). Do not use this reference material for other purposes than testing/research.

2. Hazards Identification

GHS Classification : No classification

GHS label element : —

Signal Word : —

Hazards Statement : —

Precautionary Statement : [Precaution]

Low risk in normal handling.

[First-aid Action]

If on skin: Wash with plenty of soap and water. Then Remove/Take off all contaminated clothing and adhered materials.

If skin irritation or rash occurs: Get medical advice/attention.

If in eyes: Rinse with running water for several minutes. Get medical advice/attention, if necessary.

If swallowed: Wash mouth well with clean water.

[Storage]

This CRM should be kept in a freezer (temperature lower than -20 °C). Store in a light-shielded place.

[Disposal]

Dispose of this reference material in accordance with applicable legislation and local government ordinance.
Entrust disposal of this reference material to a professional waste disposal company licensed by prefectural governor.

The other hazards than the above do not result in classification or are not classifiable.

3. Composition/Information on Ingredients

Substance/Mixture	: Mixture (aqueous solution)
Chemical name	: Deoxyribonucleic Acid(DNA) Solutions
Sample name (1)	: DNA600-G
Chemical Identity (1)	: DNA (Accession number:AB610938)
Content	: 1.38 ng/μL
Molecular Weight	: 370773.3
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : - Industrial Safety and Health Act : -
CAS Number	: Not applicable
Hazardous Ingredient	: -
Sample name (2)	: DNA600-T
Chemical Identity (2)	: DNA (Accession number:AB610935)
Content	: 1.09 ng/μL
Molecular Weight	: 370772.3
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : - Industrial Safety and Health Act : -
CAS Number	: Not applicable
Hazardous Ingredient	: -

4. First-aid Measures

If in eyes	: Rinse away thoroughly with clean water. Get medical advice/attention, if necessary.
If on skin	: Rinse with a large amount of clean water. If developing some symptoms, seek diagnostic / medical attention as needed.
If inhaled	: -
If swallowed	: Rinse mouth thoroughly with water. Get medical advice/attention when feeling unwell.
Expected Acute and Delayed Symptom	: -
Most Critical Characteristic and Symptom	: -

Protection of : Use personal protective equipment.
 First-Aid Responder

5. Fire-fighting Measures

- Extinguishing Media : Water spray, carbon dioxide, dry chemical, hydrosoluble foam extinguisher and sand.
- Fire-Specific Hazards : In case of fire, may emit irritating or toxic fume (or gas).
- Specific Fire-Fighting Method : Eliminate ignition sources at the origin of a fire and put out fire by using extinguishing media. Remove movable containers promptly to a safe place. In the case of immovable containers, cool their surroundings with sprayed water.
- Protection of Fire-Fighters : Carry out fire-fighting from the windward in order to avoid breathing hazardous gas. Use personal protective equipment such as fireproof clothing, heat-resistant clothing, protective clothing, compressed air open-circuit self-contained breathing apparatus, compressed oxygen closed-circuit self-contained breathing apparatus, rubber gloves and rubber boots.

6. Accidental Release Measures

- Personal Precaution : Use appropriate personal protective equipment to avoid contact with skin, eyes and clothing.
- Personal Protective Equipment and Emergency Procedures : Ventilate the affected areas thoroughly, if it is in an indoor environment, until the clean-up operation is completed. Use appropriate personal protective equipment during the operation to avoid skin contact of splash etc. and inhalation of dust and gas.
- Environmental Precautions : Take precautions to prevent spillage from draining into rivers etc. to adversely impact the environment. Make it sure to appropriately treat contaminated wastewater in order to prevent untreated wastewater from being released into the surrounding environment.
- Recovery and Neutralization : Collect spillage in empty containers by getting it adsorbed to wiping cloth, rag or earth and sand, etc. Rinse away the remains with plenty of water.
- Prevention of Secondary Disaster : Mark the restricted area with rope etc. to keep out unauthorized people. Carry out the clean-up operation from the windward and make people on the leeward side evacuate.

7. Handling and Storage

- Handling Engineering Precautions : Nothing special
- Local and General Ventilation : When vapor or mist is generated, seal the source, and provide local exhaust ventilation or central ventilation.
- Precautions for Safe : Avoid rough handling such as turning over, dropping, giving a

- Handling
- shock to or dragging containers.
 - Prevent spill, overflow and scattering, and avoid vapor generation.
 - Keep container tightly closed after using this reference material.
 - Wash hands, face etc. thoroughly and gargle after handling this reference material.
 - Restrict drinking, eating and smoking to a designated area.
 - Do not bring gloves and other contaminated personal protective equipment into staff room.
 - Make a place handling this reference material a restricted area to keep out unauthorized people.
 - Use appropriate personal protective equipment to avoid inhalation and contact with eyes, skin and clothing.
 - Use local ventilation system in indoor handling areas.
- Storage
- Appropriate Storage Conditions : This CRM should be kept in a freezer (temperature lower than $-20\text{ }^{\circ}\text{C}$). Store in a light-shielded place.
- Safe Container Packaging Material : Polyethylene, polypropylene

8. Exposure Controls/Personal Protection

Threshold Limit Value

Not specified

Permissible Concentration

• ACGIH TLV-TWA : No data

• Value recommended : No data

by Japan Society for Occupational Health

• OSHA PEL TWA : No data

Engineering Controls

Ventilation/Exhaust : When vapor or mist is generated, seal the source, and provide local exhaust ventilation or central ventilation.

Safety Control/ : —

Gas Detection

Storage Precaution : Keep in a freezer (temperature lower than $-20\text{ }^{\circ}\text{C}$). Store in a light-shielded place.

Personal Protective Equipment (PPE)

Respiratory System : Protective mask

Hands : Protective gloves

Eyes : Protective glass

Skin and Body : Protective clothing

Hygiene Controls

Handle this reference material in accordance with industrial health and safety standards.

9. Physical and Chemical Properties

- Appearance, etc. : Liquid samples in 2 vials
- Color : Colorless
- Odor : Odorless
- pH : No data
- Melting point : No data
- Boiling point : No data
- Flashing point : No data
- Explosive range : No data
- Vapor pressure : No data
- Relative vapor density(Air=1) : No data
- Specific gravity or bulk specific gravity : No data
- Solubility : Soluble in water.
- *n*-Octanol/water partition coefficient (Log Po/w) : No data
- Auto-ignition temperature : No data

10. Stability and Reactivity

- ◇Chemical Stability
 - Stable under normal storage conditions
- ◇Reactivity
 - No data
- ◇Conditions to Avoid
 - Sunlight, Heat
- ◇Hazardous Decomposition Products
 - No information available

11. Toxicological Information

No data available

12. Ecological Information

Persistence and Degradability

- No data available

Bioaccumulative Potential

- No data available

Ecotoxicity

- No data available

13. Disposal Considerations

Residual Waste : Incineration method
 Incinerate in an incinerator equipped with scrubber.
 Dispose in accordance with applicable regional, national and local

laws and regulations.
When the above-mentioned treatments are not possible, entrust disposal of this reference material to a professional waste disposal company licensed by local or national authority.

Contaminated Container and Package : Dispose of containers after thoroughly removing their contents.

14. Transport Information

UN Number : Not applicable
UN : —
Classification : —
Shipping Name : —
Packing Group : —
ICAO/IATA : Not applicable
Marine : Not applicable
Pollutant : —
Precautions : Upon carriage, check that there is no leakage in the container. Load the container so as to prevent slippage, falling, and damage, and provide measures to prevent load collapse. Keep the material frozen during transport in consideration of the storage conditions.

15. Regulatory Information

- No applicable laws and regulations
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16. Other Information

Others

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.
