

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, Tokyo, Japan

Office in Charge : Reference Materials Office, Center for Quality Management of Metrology, National Metrology Institute of Japan (NMIJ)

Person in Charge : Person in Charge of Certified Reference Materials

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Emergency Contact : Same as above

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ID Number : 6401002

Identity of Substance/Mixture : Certified reference material NMIJ CRM 6401-b
Cortisol in Human Serum(3 concentration levels)

Recommended Use of the Chemical and Restriction on Use : This CRM is intended primarily for use in calibration of analytical instrument and evaluating the accuracy and validation of analytical procedures or instruments for the determination of cortisol in human serum by chromatography with mass spectrometry. In addition, this CRM can be used in evaluating the accuracy and validation of analytical instrument and quantitative values by the immunoassay of the cortisol analysis, after the commutability has been verified by the user.
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: -

Other Hazards Statement : This reference material is made from human serum. Although it is found negative in the HBs antigen test, HCV antibody test and HIC antibody test, its infectivity cannot be completely denied. Handle this reference material, therefore, as cautiously as handling of specimens, e.g. use protective gloves.

This CRM is for laboratory use only and not for *in vivo* use.

Precautionary Statement : [Precaution]

Do not put this reference material in eyes, administer it orally, or inject it.

Wear protective mask, protective gloves, eye protection, etc., when

handling this reference material, so as not to allow it to enter mouth or adhere to skin.

[First-aid Action]

If swallowed: Wash mouth well with clean water.

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

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.

[Storage]

Store in a dark, clean environment at less than -20 °C.

[Disposal]

Dispose of this reference material in accordance with applicable legislation and local government ordinance. For discard, distinguish medical waste and industrial waste.

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

3. Composition/Information on Ingredients

Substance/Mixture : Mixture

Ingredient 1

Chemical name : Human Serum

Synonym : -

Chemical formula : -

Molecular weight : -

CAS number : -

Content : >99 %

Reference Number in : Act on the Evaluation of Chemical Substances and Regulation
Gazetted List in Japan of Their Manufacture, etc. :-
Industrial Safety and Health Act :-

This CRM contains substance shown below;

Ingredient 2

Chemical name : Cortisol

Synonym : Hydrocortisone

Chemical formula : C₂₁H₃₀O₅

Molecular weight : 362.46

CAS number : 50-23-7

Content : 20~100 µg/L

Reference Number in : Act on the Evaluation of Chemical Substances and Regulation
Gazetted List in Japan of Their Manufacture, etc. :-
Industrial Safety and Health Act :-

Hazardous Ingredient : -

4. First-aid Measures

If in Eyes	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention in case of abnormalities.
If on skin	:	Wash with plenty of soap and water. Get medical advice/attention in case of abnormalities or irritation occurs.
If swallowed	:	Rinse mouth thoroughly with clean water.
Expected Acute and Delayed Symptom	:	-
Most Critical Characteristic and Symptom	:	-
Protecting Personnel in emergency measures	:	Wear appropriate protective equipment such as rubber gloves, and goggles.

5. Fire-fighting Measures

Extinguishing Media	:	This material is incombustible. Use a fire extinguishing agent suitable for surrounding fire.
Fire-Specific Hazards	:	-
Specific Fire-Fighting Method	:	-
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

Recovery and Neutralization	:	Wipe out with a wet cloth in the case of small spillage. Wash away with water in the case of massive spillage.
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7. Handling and Storage

Handling

- Do not put this reference material into eyes, administer it orally, or inject it.
- Wear protective mask, protective gloves, eye protection, etc., when handling this reference material, so as not to get in mouth or on skin.

Storage

- Store in a closed container in a cool and dark place at temperatures around -20 °C.

※Please refer CRM certificate about storage conditions as reference material.

8. Exposure Controls/Personal Protection

Personal Protective Equipment (PPE)

Protective mask, Protective gloves, Protective glasses, protective clothing

9. Physical and Chemical Properties

- Appearance, etc. : Liquid
 - Color : Pale yellow
 - Odor : No data
 - 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 : No data
 - *n*-Octanol/water partition coefficient (Log Po/w) : No data
 - Auto-ignition temperature : No data
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10. Stability and Reactivity

Nonflammable non-ignitable and non-explosive at normal temperature and normal pressure.

11. Toxicological Information

Although this CRM does not include hazardous materials, to ensure safety handling, take care not to adhere to the skin or enter in the mouth.

12. Ecological Information

- Ecotoxicity : No data
 - Persistence and Degradability : No data
 - Bioaccumulation : No data
 - Mobility in soil : No data
 - Ozone depletion potential : No data
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13. Disposal Considerations

- Dispose in accordance with applicable regional, national and local laws and regulations.
 - Dispose of containers after thoroughly removing their contents.
- For discard, distinguish medical waste and industrial waste.
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14. Transport Information

UN Number : Not applicable

UN Classification	: Not applicable
Shipping Name	: Not applicable
Marine Pollutant	: Not applicable
Packing Group	: Not applicable
ICAO/IATA	: Not applicable
Precautions	: Transport this reference material carefully while keeping it away from direct sunlight and fire and preventing accidental release due to falling, overturning, etc.

15. Regulatory Information

- No applicable laws and regulations
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16. Other Information

This CRM shall not be used directly in medical purpose.

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.
