

## 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

Prepared on : August 29, 2007

Revised on : August 31, 2022

Reference No. : 7402001

Identification of the material : Certified Reference Material NMIJ CRM 7402-a  
 Trace Elements, Arsenobetaine and Methylmercury in Cod Fish Tissue

Recommended Use of the Chemical and Restriction on Use : This reference material can be used for evaluating or validating analytical methods and instruments used for the determination of the elements listed below, arsenobetaine and methylmercury in fish tissue or similar matrices. Do not use this reference material for other purposes than testing/research.  
 This CRM is a reference material (specified in the Japanese Industrial Standard (JIS) Q 0030).

### 2. Hazards Identification

GHS classification : Not classifiable

GHS label element : -

Signal word : -

Hazard and toxicity: -

Other hazard information : Eye or dermal irritation may be minor. May cause respiratory inflammation due to the accumulation of the dust inhaled in large amount.

Precautionary Statement : [Preventive Measures]  
 Toxic if orally ingested  
 [Response]  
 Wash mouth thoroughly if swallowed. Get medical treatment as needed  
 [Storage]  
 Protect from light, room temperature. Avoid conditions of high ambient temperature and humidity Store in an airtight container after opening  
 [Disposal]  
 Disposal by a commissioned professional waste disposal contractor licensed by the prefectural governor.

Hazardous and toxic properties not specified in the above are not subject to the classification nor classifiable.

### 3. Composition/Information on Ingredients

Substance or mixture : Compound product  
 Chemical name : Cod fish powder  
 Synonym : -  
 Chemical formula :  
 Molecular weight :  
 CAS number :  
 Content :  
 Reference Number in : Act on the Evaluation of Chemical Substances and Regulation of  
 Gazetted List in Japan Their Manufacture, etc. : -  
 Industrial Safety and Health Act : -

This CRM contains minor elements and two metal compounds shown below:

Cr, Mn, Fe, Ni, Cu, Zn, As, Se, Hg, Na, Mg, K, Ca, Al, Co, Sr, Mo, Cd, Sb, Pb, P, Arsenobetaine, Methylmercury.

The concentrations of these ingredients are shown in the tables below;

Element	Certified Value Concentration (mg/kg)
Cr	0.72
Mn	0.41
Fe	11.2
Ni	0.38
Cu	1.25
Zn	21.3
As	36.7
Se	1.8
Hg	0.61

Element	Certified Value Concentration (mg/kg)
Na	3.6
Mg	1.34
K	22.3
Ca	0.52

Compound	Certified Value Concentration (mg/kg)
Arsenobetaine (as As)	33.1
Methylmercury (as Hg)	0.58

Elements	Al	Co	Sr	Mo	Cd	Sb	Pb	P
Concentration	5 mg/kg	0.04 mg/kg	2 mg/kg	0.01 mg/kg	0.009 mg/kg	0.02 mg/kg	0.04 mg/kg	12 g/kg

### 4. First-aid Measures

If in eyes : Rinse carefully with plenty of clean water.  
Get medical assistance

If on skin : Flush the skin with plenty of clean water  
Take off the contaminated clothing and shoes, etc. and get medical assistance.

If inhaled : Move to get some fresh air, keep warm and rest  
Get medical assistance

If swallowed : Wash mouth thoroughly with water.

- Get medical assistance
- Anticipated acute and delayed symptoms, : -
- The most important characteristics and symptoms : -
- Measures to be taken to protect the person applying first aid : -

## 5. Fire-fighting Measures

- Extinguishing media : Use a medium compatible with the fire in the surrounding area
- Specific hazards at the time of fire : -
- Specific extinguishing measures : Remove fire sources, extinguish with the extinguishing agent. Transfer the movable containers to a safe place promptly. If impossible to move, cool the periphery by water-spray,
- Protecting fire-fighting personnel. : Fire-safe, heat-resistant protective clothing, air-breathing apparatus, self-contained compressed air breathing apparatus, rubber gloves, rubber boots

## 6. Accidental Release Measures

- 1 Suppress the dust dispersion as much as possible and collect the dust in an empty container, then wash away with water.

## 7. Handling and Storage

### Handling

- Technological counter measures : Avoid contact with eye, skin and clothing  
Avoid inhaling the dust  
Avoid longtime or repetitive exposure  
No eating, drinking or smoking when handling  
Wash hands well after handling  
Should not be used for purposes other than the original research intent.

- Local ventilation/ general ventilation : -

- Precautions for safe handling : -

### Storage

- Appropriate condition : Protect from light, in an airtight container at room temperature.
- Safe packing material : -

※ Please refer the certificate about the details of appropriate storage conditions and precautions for the use as reference material.

## 8. Exposure Controls/Personal Protection

Points of concern pertaining safety management

Not established

Administrative levels

Not established

Occupational exposure limit

- ACGIH TLV-TWA : Not established
- Japan Society for Occupational Health : Not established

Recommended Reference Value

Facility engineering control

◇Ventilation exhaust

- Local ventilation system or general (central) ventilation system (when handling large quantity or generating large quantity dust)

Protective equipment

- Breathing apparatus
- Safety goggles

## 9. Physical and Chemical Properties

- Appearance, etc. : Powder
- Color : White
- 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

## 10. Stability and Reactivity

◇Stability

Stable under normal condition

◇Reactivity

No data available

◇Conditions to avoid

No data available

◇Hazardous decomposition products

No data available

## 11. Toxicological information

Skin corrosivity and irritancy : Possibly irritating

Severe damage to eye/eye irritancy : Possibly irritating  
Respiratory sensitization : If inhaled in large amount, accumulation in respiratory tract can be harmful and may cause damages

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## 12. Ecological Information

Degradability, concentration

• No data available

Bioaccumulation

• No data available

Ecotoxicity

• No data available

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## 13. Disposal Considerations

- Disposal by a commissioned professional industrial waste disposal contractor licensed by the prefectural governor.

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## 14. Transport Information

UN Number : Not applicable

UN Classification : Not applicable

Material name : -

Container grade : -

ICAO/IATA : -

Marine pollutant : -

Precautions : Transfer with care. Avoid falling. Do not drop

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## 15. Regulatory Information

• No applicable laws and regulations

- © **This SDS is originally prepared for the use of the material in Japan, thus the stated laws and regulations are stipulated and carried out in Japan. The use of the material in other countries should be referred to and by application of the relevant laws and regulations of the country in which the material will be used.**

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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.