



Prepared date: 30 October 2018  
Revised date : 22 March 2019

## Safety Data Sheet

### [1] PRODUCT AND COMPANY INFORMATION

Product name Crustacean ELISA Kit II

Manufacturer's name Morinaga Institute of Biological Science, Inc.  
Address 2-1-16 Sachiura, Kanazawa-ku Yokohama 236-0003 Japan  
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SDS No. GHS-CR-11

### [2] HAZARDS IDENTIFICATION

kit contains mixtures of hazardous and non-hazardous substances. Below are materials identified as potentially hazardous.

#### (1) Sodium lauryl sulfate, water

Human health hazard

Serious eye damage · Eye irritation : Category 2B

Specific target organ systemic toxicity : Category 3

Specific target organ systemic toxicity : Category 2

(repeated exposure)

Environmental hazard

Hazardous to the aquatic environment (acute hazard) : Category 3

Pictogram or symbol



Signal word : danger

Hazard statement : Causes serious eyes irritation.  
May cause respiratory irritation  
May cause damage to organs(kidney) through prolonged or repeated exposure.  
Harmful to an aquatic life.

Cautions

Safety measures : Wear appropriate protective gloves, glasses, clothing, face shield, or mask.

: Wash protective equipment thoroughly after use.

First-aid measures : If in eyes: Rinse cautiously with water for several minutes.  
Get medical treatment

: If on skins: Remove contaminated clothing and the substance.  
Rinse cautiously with water. Immediately get medical treatment.

#### (2) Sodium sulfite, water

Human health hazard

Serious eye damage · Eye irritation : Category 2B

Pictogram or symbol	
Signal word	: Warning
Hazard statement	: Causes serious eyes irritation.
Cautions	
First-aid measures	: If in eyes: Rinse cautiously with water for several minutes. Get medical treatment Wash hands thoroughly after handling.

## (3) Sulfuric acid

Human health hazard	
Skin corrosion • Irritation	: Category 1A
Serious eye damage • Eye irritation	: Category 1
Specific target organ systemic toxicity (single exposure)	: Category 1
Specific target organ systemic toxicity (repeated exposure)	: Category 1
Pictogram or symbol	



Signal word	: Danger
Hazard statement	: Causes severe skin burns and eye damage. : Causes serious eye damage. : Causes damage to organs (respiratory organs) : Cause damage to organs (respiratory organs) through prolonged or repeated exposure.
Cautions	
Safety measures	: Do not breathe dust, mist, and vapor. : Do not eat, drink, or smoke when using this product. : Wear appropriate protective gloves, glasses, clothing, face shield, or mask. : Wash protective equipment thoroughly after use.
First-aid measures	: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. : If swallowed: Rinse mouth, do not induce vomiting. Immediately get medical treatment. If in eyes: Rinse cautiously with water for several minutes. Get medical treatment : If on skins: Remove contaminated clothing and the substance. Rinse cautiously with water. Immediately get medical treatment. : Wash hands thoroughly after use.

**(3) COMPOSITION/INFORMATION ON INGREDIENTS**

## (1) Sodium lauryl sulfate, water

Substance/Mixture	: Substance
Chemical name or commercial name	: Sodium n-dodecyl sulfate
Synonyms	: Sodium lauryl sulfate
Ingredients and composition	: Sodium lauryl sulfate, water solution. The content is not disclosed
Formula	: $\text{CH}_3(\text{CH}_2)_{10}\text{CH}_2\text{OSO}_3\text{Na}$
CAS-No.	: 151-21-3
TSCA Inventory	: Registered
EINECS	: 2057881

- (2) Sodium sulfite, water  
 Substance/Mixture : Substance  
 Chemical name or commercial name : Sodium sulfite, water  
 Ingredients and composition : Sodium sulfite, water solution. The content is not disclosed  
 Formula : Na<sub>2</sub>SO<sub>3</sub>  
 CAS-No. : 7757-83-7  
 TSCA Inventory : Registered  
 EINECS : 2318214
- (3) Sulfuric acid  
 Substance/Mixture : Substance  
 Chemical name or commercial name : Sulfuric acid  
 Ingredients and composition : Water solution contains 0.5mol/L sulfuric acid.  
 Formula : H<sub>2</sub>SO<sub>4</sub>  
 CAS-No. : 7664-93-9  
 TSCA Inventory : Registered  
 EINECS : 2316395  
 Dangerous and hazardous ingredients : sulfuric acid

**[4] FIRST AID MEASURES**

- (1) Sodium lauryl sulfate, water  
 (2) Sodium sulfite, water  
 Inhalation : Remove the victim to fresh air. Blow nose and gargle  
 Skin contact : Wash the affected areas under running water.  
 Eye contact : Wash the affected areas under running water.  
 Ingestion : Give the victim one or two glasses of water or saline and induce vomiting. Get medical treatment.
- (3) Sulfuric acid  
 Inhalation : Remove the victim to fresh air, and keep him warm.  
 Skin contact : Wash the affected areas under running water.  
 Eye contact : Wash the affected areas under running water.  
 Ingestion : Give the victim one or two glasses of water or milk with egg white. Do not induce vomiting. Get medical treatment.  
 Anticipated acute and delayed symptoms. : If inhaled sulfuric acid mist, cause throat ache, cough, and shortness of breath.  
 : If contacted skin, cause redness, ache, blister, and burn.

**[5] FIRE-FIGHTING MEASURES**

- Extinguishing media : This product is noncombustible.  
 Prohibited extinguishing media : None  
 Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.  
 Protection for firefighters : Firefighters should wear protective equipment.

**[6] ACCIDENTAL RELEASE MEASURES**

- (1) Sodium lauryl sulfate, water  
 (2) Sodium sulfite, water  
 Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor.  
 Cautions for environmental : Attention should be given not to cause damage to the environment by flowing of spillage to rivers.  
 Removal measures : In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.  
 : Absorb spill with paper or cloth.  
 : Wash thoroughly with water
- (3) Sulfuric acid  
 Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor.

Cautions for environmental	: Attention should be given not to cause damage to the environment by flowing of spillage to rivers.
	: In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.
Removal measures	: Absorb spill with paper or cloth.
	: Wash thoroughly with water
Prevention of second accident	: Do not contact with organic substances or combustible substances.

## 【7】 HANDLING AND STORAGE

### Handling

Engineering measures	: Wear proper protective equipment not to contact with skin or
	: Handle not to generate aerosol or vapor.

Cautions for safety handling	: Use with an enclosed system or a local exhaust ventilation
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### Storage

Adequate storage condition	: Store in a dark, cool place and tightly closed.
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Safety adequate container materials	: Glass, polyethylene, polypropylene
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## 【8】 EXPOSURE CONTROL/PERSONAL PROTECTION

### (1) Sodium lauryl sulfate, water

#### (2) Sodium sulfite, water

Engineering measures	: Use only with adequate ventilation and in closed systems.
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#### Control parameters

ACGIH(2009)	: Not applicable
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#### Protective equipment

Respiration protective equipment	: Not necessary
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Hands protective equipment	: Impervious protective gloves
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Eyes protective equipment	: Safety goggles
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### (3) Sulfuric acid

Engineering measures	: Use only with adequate ventilation and in closed systems.
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#### Control parameters

ACGIH(2009)	: 0.2mg/m <sup>3</sup> (TLV-TWA)
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#### Protective equipment

Respiration protective equipment	: If necessary, wear a chemical cartridge respirator with acidic gas.
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Hands protective equipment	: Impervious protective gloves
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Eyes protective equipment	: Safety goggles
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## 【9】 PHYSICAL AND CHEMICAL PROPERTIES

### (1) Sodium lauryl sulfate, water

Appearance	: Liquid
Colour	: Colourless
Odor	: Odorless
pH	: 7.0-9.0
Boiling point	: Not Available
Melting point	: Not Available
Flash point	: Noncombustible
Specific gravity	: Approx. 1.0 g/mL
Solubility	: Water: Freely soluble

### (2) Sodium sulfite, water

Appearance	: Liquid
Colour	: Colourless
Odor	: Odorless
pH	: 9.0-11.0
Boiling point	: Not Available
Melting point	: Not Available
Flash point	: Noncombustible
Specific gravity	: Approx. 1.1 g/mL
Solubility	: Water: Freely soluble

### (3) Sulfuric acid

Appearance	: Liquid
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Colour	: Colourless
Odor	: Odorless
pH	: Strong acidity
Boiling point	: Approx. 100°C
Melting point	: Approx. -2°C
Flash point	: Noncombustible
vapor dencity	: 3.4
Specific gravity	: 1.030g/ml (20°C)
Solubility	: Water: Freely soluble

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#### 【10】 STABILITY AND REACTIVITY

##### (1) Sodium lauryl sulfate, water

Stability	: Stable under normal usage
Reactivity	: May react with strong oxidizing substances.
Incompatible conditions	: Light, heat
Incompatible materials	: Oxidizing substances
Hazardous decomposition products	: Toxic fumes of sulfur oxides (Sox), carbon monoxide

##### (2) Sodium sulfite, water

Stability	: Stable under normal usage
Reactivity	: oxidized gradually in air
Incompatible conditions	: Light, heat
Incompatible materials	: Oxidizing substances
Hazardous decomposition	: Sulfur oxides

##### (3) Sulfuric acid

Stability	: Stable under normal usage
Reactivity	: May react with alkaline substances.
Incompatible conditions	: Light, heat
Incompatible material	: Alkaline substances
Hazardous decomposition products	: Sulfur oxides

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#### 【11】 TOXICOLOGICAL INFORMATION

##### (1) Sodium lauryl sulfate, water

Acute toxicity, Oral	Out of category
Acute toxicity, Dermal	Out of category
Inhalation (gas)	: Not possible to classify because of insufficient data
Inhalation (dust, mist)	: Not possible to classify because of insufficient data
	: If swallowed, may cause nausea, vomiting, abdominal pain.
	Rat oral LD50=1290mg/kg (as sodium lauryl sulfate)
	Rat intraperitoneal LD50=210mg/kg (as sodium lauryl sulfate)
Skin corrosiveness	: Out of category
Irritation to skin, eyes	: Causes serious eyes irritation.(Category 2B)
	Since cause moderate irritation to the eyes of rabbit, it was classified into category 2B.
Respiratory sensitization or skin sensitization	
Respiratory sensitization	: Not possible to classify because of insufficient data
Skin sensitization	: Not possible to classify because of insufficient data
Mutagenicity	: Out of category
Carcinogenic effects	: Not possible to classify because of insufficient data
Effects on the reproductive system	: Not possible to classify because of insufficient data
Specific target organ systemic toxicity(Single exposure)	: Causes stimulation to respiratory organs.(Category 3)
	Based on descriptions that respiratory tract irritation is seen by aerosol exposure in a mouse, a rabbit, and a guinea pig and that respiratory tract irritation is seen by short term exposure, it was classified into category 3.
Specific target organ systemic toxicity(repeated exposure)	: May cause damage to organs(kidney) through prolonged or repeated exposure(category 2)

	It is written that there were vacuolar degeneration of kidney tubular epithelial cells, and atrophica of kidney glomerulus. Since these symptoms were found within the scope of the guidance value of Category 2, it was classified into category 2(kidney).
Aspiration hazard	: Not possible to classify because of insufficient data
(2) Sodium sulfite, water	
Acute toxicity, Oral	Out of category
Acute toxicity, Dermal	Not possible to classify because of insufficient data
Inhalation (gas)	: Not possible to classify because of insufficient data
Inhalation (dust, mist)	: Not possible to classify because of insufficient data (as Sodium sulfite)
	Rat oral LD50=3560mg/kg
Skin corrosiveness	: Out of category
Irritation to skin, eyes	: Causes serious eyes irritation.(Category 2B) Since cause moderate irritation to the eyes of rabbit, it was classified into category 2B.
Respiratory sensitization or skin sensitization	
Respiratory sensitization	: Not possible to classify because of insufficient data
Skin sensitization	: Not possible to classify because of insufficient data
Mutagenicity	: Out of category
Carcinogenic effects	: Not possible to classify because of insufficient data
Effects on the reproductive system	: Not possible to classify because of insufficient data
Specific target organ systemic toxicity(Single exposure)	
	: Not possible to classify because of insufficient data Sulfite salt is oxidized and is converted to sulfate ion inside bodies, but digestive organs are irritated because of isolated sulfite ion. If human swallowed 4g of the substance, they have poisoning digestive organs. However, it is not possible to classify because of insufficient data
Specific target organ systemic toxicity(repeated exposure)	
	: Not possible to classify because of insufficient data
Aspiration hazard	: Not possible to classify because of insufficient data
(3) Sulfuric acid	
Acute toxicity, Oral	Out of category
Acute toxicity, Dermal	Not possible to classify because of insufficient data
Inhalation (vapor)	: Not possible to classify because of insufficient data
Inhalation (dust, mist)	: Out of category
	Rat oral LD50=44580mg/kg (as calculated value)
	Rat inhalation LC50=7230ppm/l/4H (as calculated value)
Skin corrosiveness	: Causes severe skin burns. (Category 1A)
Irritation to skin, eyes	: Causes serious eye damage. (Category 1) In case of human accident of sulfuric acid, severe eye
Respiratory sensitization or skin sensitization	
Respiratory sensitization	: Not possible to classify because of insufficient data
Skin sensitization	: Out of category Sulfuric acid has no human skin sensitization.
Mutagenicity	: Not possible to classify because of insufficient data
Carcinogenic effects	: Not possible to classify because of insufficient data
Effects on the reproductive system	: Out of category
Specific target organ systemic toxicity(Single exposure)	
	: Cause damage to organs (respiratory organs) (category 1)
Specific target organ systemic toxicity(repeated exposure)	
	: Cause damage to organs (respiratory organs) through prolonged or repeated exposure. (category 1)
Aspiration hazard	: Not possible to classify because of insufficient data

**【12】 ECOLOGICAL INFORMATION**

## (1) Sodium lauryl sulfate, water

## Ecotoxicity

## Fish toxicity

Acute aquatic toxicity : Category3 American Lobster LC50=0.72mg/L/96H

Chronic aquatic toxicity : Not possible to classify because of insufficient data

## (2) Sodium sulfite, water

## (3) Sulfuric acid

## Ecotoxicity

## Fish toxicity

Acute aquatic toxicity : Not possible to classify because of insufficient data

Chronic aquatic toxicity : Not possible to classify because of insufficient data

**【13】 DISPOSAL CONSIDERATIONS**

## (1) Sodium lauryl sulfate, water

## (2) Sodium sulfite, water

## Residual disposal

: Dilute with copious water and adjust the pH of the solution,  
: after flush in drains.

: Or entrust approved waste disposal companies with the disposal

## Containers

: In case of disposal of empty bottles, dispose bottles after  
: removing the content thoroughly.

## (3) Sulfuric acid

## Residual disposal

: Add the chemical gradually in alkaline water solution like

: calcium hydroxide, sodium carbonate to neutralized and flush

: Or entrust approved waste disposal companies with the disposal

## Containers

: In case of disposal of empty bottles, dispose bottles after  
: removing the content thoroughly.**【14】 TRANSPORT INFORMATION**

## UN class

: Not applicable

## UN-Number:

: Not applicable

**【15】 REGULATORY INFORMATION**

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

**【16】 OTHER INFORMATION**

## References

: Encyclopaedia Chemica, Kyoritsu Shuppan Co., Ltd.

The information contained herein is based on several references and the present state of our knowledge. However, the MSDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information , and it does not represent a guarantee the properties of the product