

Safety Data Sheet

【1】 PRODUCT AND COMPANY INFORMATION

Product name	Egg (Ovalbumin) ELISA Kit II Total Milk ELISA Kit II Casein ELISA Kit II Beta-lactoglobulin ELISA Kit II Wheat/Gluten (Gliadin) ELISA Kit II Peanut ELISA Kit II Buckwheat ELISA Kit II Soya ELISA Kit II Hazelnut ELISA Kit II High Sensitive Peanut ELISA Kit II Sesame ELISA Kit II Crustacean ELISA Kit II Walnut ELISA Kit II Almond ELISA Kit II Cashew ELISA Kit II
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SDS No.	GHS-SF-101

【2】 HAZARDS IDENTIFICATION

This kit contains hazardous and non-hazardous substances. Hazardous substances are described below.

(1) Sodium lauryl sulfate, water (component contained in: Reagent A (10X Concentrate))


Health hazards	
Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Environmental hazards	
Hazardous to the aquatic environment (acute)	Category 3
Pictogram or symbol	




Signal word	Danger
Hazard statements	Causes eye irritation May cause respiratory irritation May cause kidney damage through long-term or repeated exposure Harmful to aquatic life.
Precautionary statements	Do not eat, drink, or smoke when using this product. Wear appropriate protective gloves, protective clothing, protective eyewear, and protective mask. Wash hands thoroughly after handling.
First aid	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage	If on skin: Wash with plenty of water and soap. If on skin or hair: Immediately remove contaminated clothing. Store sealed in a cool place away from direct sunlight.
Disposal	Keep locked up. Dispose of contents/container in accordance with laws and regulations.

(2) Sodium sulfite, water (component contained in: Reagent B (10X Concentrate))

Health hazards	Serious eye damage/eye irritation	Category 2B
Pictogram or symbol		
Signal word	Warning	
Hazard statements	Causes eye irritation	
Precautionary statements	Do not eat, drink, or smoke when using this product. Wear appropriate protective gloves, protective clothing, protective eyewear, and protective mask. Wash hands thoroughly after handling.	
First aid	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
Storage	Store sealed in a cool place away from direct sunlight.	
Disposal	Dispose of contents/container in accordance with laws and regulations.	

(3) Sulfuric acid (component contained in: Stop Solution (1N Sulfuric Acid))

Health hazards	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity (single exposure)	Category 1
	Specific target organ toxicity (repeated exposure)	Category 1
Environmental hazards	Hazardous to the aquatic environment (acute)	Category 2
Pictogram or symbol		
Signal word	Danger	
Hazard statements	Causes severe skin burns and eye damage Causes serious eye damage Causes damage to the respiratory system Causes damage to the respiratory system through prolonged or repeated exposure	
Precautionary statements	Do not breathe dust, mist, or vapor. Do not eat, drink, or smoke when using this product. Wear appropriate protective gloves, protective clothing, protective eyewear, and protective mask. Wash hands thoroughly after handling.	
First aid	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If swallowed: Rinse mouth. Do not induce vomiting. If swallowed, if on skin (or hair), if inhaled, or if in eyes: Immediately contact a physician. If you feel unwell, seek medical attention.	
Storage	Keep locked up.	
Disposal	Dispose of contents/container in accordance with laws and regulations.	

【3】 COMPOSITION/INFORMATION ON INGREDIENTS

(1) Sodium lauryl sulfate, water	
Substance/Mixture	Mixture
Chemical name or commercial name	Sodium n-dodecyl sulfate
Synonyms	Sodium lauryl sulfate
Ingredients and composition	Aqueous solution of sodium lauryl sulfate; concentration not disclosed
Formula	CH ₃ (CH ₂) ₁₀ CH ₂ OSO ₃ Na
CAS-No.	151-21-3
TSCA Inventory	Listed
EINECS	205-788-1
(2) Sodium sulfite, water	
Substance/Mixture	Mixture
Chemical name or commercial name	Sodium sulfite
Ingredients and composition	Aqueous solution of sodium sulfite; concentration not disclosed
Formula	Na ₂ SO ₃
CAS-No.	7757-83-7
TSCA Inventory	Listed
EINECS	231-821-4
(3) Sulfuric acid	
Substance/Mixture	Mixture
Chemical name or commercial name	Sulfuric acid
Ingredients and composition	Aqueous solution of sulfuric acid, 0.5 mol/L (4.9%)
Formula	H ₂ SO ₄
CAS-No.	7664-93-9
TSCA Inventory	Listed
EINECS	231-639-5
Dangerous and hazardous ingredients	Sulfuric acid

【4】 FIRST AID MEASURES

(1) Sodium lauryl sulfate, water	
(2) Sodium sulfite, water	
Inhalation	Move victim to fresh air and rest in a position comfortable for breathing.
Skin contact	Wash the affected areas under running water.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Ingestion	Rinse mouth. Do not induce vomiting. Get medical attention.
(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	Rinse mouth. Do not induce vomiting. Seek immediate medical attention.
Anticipated acute and delayed symptoms	If sulfuric acid mist is inhaled, it may cause sore throat, cough, and shortness of breath. Skin contact may cause redness, pain, blisters, and burns.

【5】 FIRE-FIGHTING MEASURES

Extinguishing media	This product is non-combustible.
Unsuitable extinguishing media	None
Particular fire fighting	If it can be done safely, move containers from the fire area; if not possible, apply water from a safe distance to cool and protect the surroundings.
Protection for firefighters	Wear appropriate self-contained breathing apparatus (SCBA) and chemical protective clothing.

[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 Prevent released material from entering waterways and sewers to avoid environmental damage.

Removal measures When diluting with copious water, do not discharge untreated wastewater that could cause environmental harm.

 Absorb with inert material (e.g., dry sand, earth), place in a chemical waste container. Neutralize with soda ash or slaked lime, then flush with plenty of water.

(3) Sulfuric acid

Cautions for personnel Wear proper equipment and avoid contact with skin and inhalation of vapor.

Cautions for environmental Prevent released material from entering waterways and sewers to avoid environmental damage.

Removal measures When diluting with copious water, do not discharge untreated wastewater that could cause environmental harm.

 Absorb with inert material (e.g., dry sand, earth), place in a chemical waste container. Neutralize with soda ash or slaked lime, then flush with plenty of water.

Prevention of second accident Do not allow contact with organic substances or combustible materials.

[7] HANDLING AND STORAGE

Handling

Engineering measures Wear appropriate protective equipment to avoid skin contact. Handle to avoid generating aerosols or vapors.

Precautions for safe handling Use with an enclosed system or local exhaust ventilation.

Storage

Suitable storage conditions Store tightly closed in a cool, dark place.

Suitable container materials Glass, polyethylene, polypropylene

[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.

Control parameters
ACGIH (2009) Not applicable

Protective equipment

Respiratory protection Not required under normal conditions of use.

Hands protective equipment Impervious protective gloves

Eyes protective equipment Safety goggles

(3) Sulfuric acid

Engineering measures Use only with adequate ventilation and in closed systems.

Control parameters
ACGIH(2009) 0.2 mg/m³ (TLV-TWA)

Protective equipment

Respiratory protection If necessary, wear a chemical cartridge respirator with acid gas cartridges.

Hands protective equipment Impervious protective gloves

Eyes protective equipment Safety goggles

[9] PHYSICAL AND CHEMICAL PROPERTIES

(1) Sodium lauryl sulfate, water

Appearance Liquid

Color Colorless

Odor Slight characteristic odor

pH 7.5–9.0

Boiling point	Not available
Melting point	Not available
Flash point	Non-combustible
Specific gravity	Approx. 1.0 g/mL
Solubility	Water: Freely soluble
(2) Sodium sulfite, water	
Appearance	Liquid
Color	Colorless
Odor	Odorless
pH	9.0-11.0
Boiling point	Not available
Melting point	Not available
Flash point	Non-combustible
Specific gravity	Approx. 1.1 g/mL
Solubility	Water: Freely soluble
(3) Sulfuric acid	
Appearance	Liquid
Color	Colorless
Odor	Odorless
pH	0.3
Boiling point	Approx. 100°C
Melting point	Approx. -2°C
Flash point	Non-combustible
Vapor density	Not applicable for aqueous solution
Specific gravity	1.03 g/mL (20°C)
Solubility	Water: Freely soluble

【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	Toxic fumes of sulfur oxides (SO _x), carbon monoxide
(2) Sodium sulfite, water	
Stability	Stable under normal usage
Reactivity	Oxidizes 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 materials	Alkaline substances, many metals, strong oxidizers
Hazardous decomposition	Sulfur oxides(SO _x)

【11】 TOXICOLOGICAL INFORMATION

(1) Sodium lauryl sulfate, water	
Acute toxicity, Oral	Not classified
Acute toxicity, Dermal	Not classified
Inhalation (gas)	Not classifiable due to insufficient data
Inhalation (dust, mist)	Not classifiable due to 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	Not classified
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 classifiable due to insufficient data
Skin sensitization	Not classifiable due to insufficient data
Mutagenicity	Not classified
Carcinogenic effects	Not classifiable due to insufficient data
Reproductive toxicity	Not classifiable due to insufficient data
Specific target organ systemic toxicity(Single exposure)	Respiratory tract irritation (Category 3). Based on descriptions that respiratory tract irritation is seen by aerosol exposure in mouse, a rabbit, and guinea pig and that respiratory tract irritation is seen by short terms 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 has been reported that there were vacuolar degeneration of kidney tubular epithelial cells, and atrophic of kidney glomerulus. Since these symptoms were found within the scope of the guidance value of Category2, it was classified into category 2(kidney).
Aspiration hazard	Not possible to classify because of insufficient data
(2) Sodium sulfite, water	
Acute toxicity, Oral	Not classified
Acute toxicity, Dermal	Not classifiable due to insufficient data
Inhalation (gas)	Not classifiable due to insufficient data
Inhalation (dust, mist)	Not classifiable due to insufficient data (as Sodium sulfite) Rat oral LD50=3560mg/kg
Skin corrosiveness	Not classified
Irritation to skin, eyes	Causes serious eye 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 classifiable due to insufficient data
Skin sensitization	Not classifiable due to insufficient data
Mutagenicity	Not classified
Carcinogenic effects	Not classifiable due to insufficient data
Effects on the reproductive system	Not classifiable due to insufficient data
Specific target organ systemic toxicity(Single exposure)	Not classifiable due to 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 classifiable due to insufficient data
Aspiration hazard	Not classifiable due to insufficient data
(3) Sulfuric acid	
Acute toxicity, Oral	Not classified
Acute toxicity, Dermal	Not classifiable due to insufficient data
Inhalation (vapor)	Not classifiable due to insufficient data
Inhalation (dust, mist)	Not classified Rat oral LD50=44580mg/kg (as calculated value) Rat inhalation LC50 = 7,230 ppm (4 h)(as calculated value)
Skin corrosiveness	Causes severe skin burns. (Category1A)
Irritation to skin, eyes	Causes serious eye damage. (Category1) In case of human accident of sulfuric acid, severe eye damage with lysed anterior chamber of the eyes was recognized. 5% solutions caused mild irritation or rabbit eyes, and 10% solutions caused severe irritation on rabbit eyes.
Respiratory sensitization or skin sensitization	

Respiratory sensitization	Not classifiable due to insufficient data
Skin sensitization	Not classified
Mutagenicity	Sulfuric acid has no human skin sensitization. Not classifiable due to insufficient data In vitro studies regarding both germ cells and somatic cells have no data, in vitro mutagenicity, the single index of chromosomal abnormality test is positive, but other indexes are negative, so the classification is impossible due to insufficient data.
Carcinogenic effects	Not classifiable due to insufficient data
Reproductive toxicity	Not classified Inhalation studies of sulfuric acid of rabbits and mice during the period of embryo organogenesis, the dose that does not recognized toxicity on dams appears no embryo toxicity and tetraagenicity on both species. As the main toxicity is direct irritation and corrosion on the local tissue, there is no concern of reproductive toxicity.
Specific target organ systemic toxicity(Single exposure)	Cause damage to organs (respiratory organs) (category 1) In inhalation studies of sulfuric acid of human in the low concentration, irritation symptoms of respiratory tract like cough, shortness of breath are recognized. In the high concentration, acute effects like cough, shortness of breath, bloodstained sputum evacuation and continuing effects like decreased function of lungs, emphysema are recognized. In inhalation studies of guinea pig for eight hours, lung bleeding and dysfunction are recognized.
Specific target organ systemic toxicity(repeated exposure)	Cause damage to organs (respiratory organs) through prolonged or repeated exposure. (category 1) In inhalation studies of sulfuric acid of rats for 28 days, at the guidance concentration range of category 1, cell growth on pharyngeal mucosa is recognized. In repeated inhalation studies of guinea pig, in the same concentration, respiratory tract and lung disorder are recognized. in inhalation, studies of cynomolgus monkeys for 78 weeks, at the guidance concentration range of category 1, histological alteration like hyperplastic cell on bronchiole, thickened lung wall are recognized.
Aspiration hazard	Not classifiable due to insufficient data

【12】 ECOLOGICAL INFORMATION

(1) Sodium lauryl sulfate, water	
Ecotoxicity	
Aquatic toxicity	
Acute aquatic toxicity	Category 3 American lobster LC50 = 0.72 mg/L (96 h).
Chronic aquatic toxicity	Not possible to classify because of insufficient data
(2) Sodium sulfite, water	
Ecotoxicity	
Aquatic toxicity	
Acute aquatic toxicity	Not possible to classify because of insufficient data
Chronic aquatic toxicity	Not possible to classify because of insufficient data
(3) Sulfuric acid	
Ecotoxicity	
Aquatic toxicity	
Acute aquatic toxicity	Not possible to classify because of insufficient data
Chronic aquatic toxicity	Category 2

【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 that, discharge to drains.
Containers	Or entrust approved waste disposal companies with the disposal. 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 neutralize and flush in a drain with a large amount of water.
Containers	Or entrust approved waste disposal companies with the disposal. 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 compliance with applicable federal requirements and conformity to local regulations.

【16】 OTHER INFORMATION

References	Dictionary of Organic Compounds (1985) Great Dictionary of Science (1964) NITE Chemical Substance Information Platform CSCL Database Compendium of Laws and Regulations on Chemical Substances, Revised 4th Edition (2004)
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This data sheet has been prepared based on materials and information available at the time of preparation, but does not cover all information. The precautions described are intended for normal handling; for special handling, implement safety measures appropriate to the specific use and application. The values provided are reference information for safe handling and do not constitute any warranty.