Prepared date: 21 July 2021
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Safety Data Sheet

【1】PRODUCT AND COMPANY INFORMATION

Product name	Instant Swab Total Protein
Recommended use	Simplified Swab Test Kit for protein residue

Company's name	Morinaga Institute of Biological Science, Inc.
Address	2-1-1 Shimosueyoshi, Tsurumi-ku,Yokohama-shi, 230-8504, Japan
Section	Quality assurance department
Telephone	+81-45-586-2514
Fax	+81-45-586-2517

SDS No. GHS-IP-11

【2】HAZARDS IDENTIFICATION

GHS Classification

Physical and chemical hazard	
Flammable liquids	: Category 2
Human health hazard	
Serious eye damage/eye irritation	: Category 2B
Reproductive cell mutagenicity	: Category 1B
Reproductive toxicity	: Category 1
Specific target organ toxicity(Single exposure)	: Category 3 (Respiratory tract irritation, Narcotic effect)
Specific target organ toxicity(Repeated exposure)	: Category 1 (liver) Category 2 (central nervures system)

Pictogram or symbol

Signal word : danger

Hazard statement
- : Highly flammable liquid
- : Causes serious eye irritation
- : May cause genetic defects
- : May damage fertility or the unborn child
- : May cause respiratory irritation
- : May cause drowsiness or dizziness
- : Cause damage to liver through prolonged or repeated exposure
- : May cause damage to nervous system through prolonged or repeated exposure

Precautionary statements

Prevention
- : Obtain, read and follow all safety instructions before use
- : Keep away from heat, hot surfaces, sparks, open flamers and other ignition source. No smoking.
- : Keep container tightly closed.
- : Do not breathe vapors or mists.
- : Wash hands thoroughly after handling.
- : Do not eat, drink or smoke when using this product.
- : Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

If on skin(or hair)	:	Take off immediately all contaminated clothing. Rinse affected areas with water(or shower).
If on eyes	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists	:	Get medical help.
If inhaled	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical help if you feel unwell.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store looked up.

Disposal

Dispose of contents/container in accordance with local and national regulations.

【3】COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture : Mixture(reagents and swab)

Ingredients and reagents (0.5mL per pieces) :

Material	CAS Number	%
Ethanol	64-17-5	40.8
Glycerol	56-81-5	40-55
Citric acid	5949-29-1	1-5
Coloring matter	-	<1%
Water	7732-18-5	5-20%

【4】FIRST AID MEASURES

Inhalation	:	Remove the victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
Skin contact	:	Wash skin with soap and plenty of water.
Eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call POISON CENTER or doctor.
Ingestion	:	After rinse the mouth with water again and again, give several cups of water drink for diluting the effect. Induce vomiting with fingers inserted into the throat if possible. Get medical attention immediately.

【5】FIRE-FIGHTING MEASURES

Extinguishing media	:	Water, dry, chemical, alcohol-resistant form and carbon dioxide.
Fire fighting	:	In the initial stage of fire, extinguish the fire with large amount of water injection, or with fire extinguishers using dry chemical, carbon dioxide,etc. In case of big fire, interrupt form the air by foam(alcohol-resistant form)
Protection for firefighters	:	Wear an appropriate respirator and chemical protective clothing during fire fighting.

【6】ACCIDENTAL RELEASE MEASURES

Personal precautions Protective equipment and emergency procedures	:	For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipment to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.
Environmental precautions	:	To be careful not discharged to the environment without being properly handled waste water contaminated.
Methods and materials for contaminant and methods and materials for cleaning up	:	Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, neutralization : No information available.
Secondary disaster prevention measures : Clean contaminated objects and areas thoroughly observing environmental regulations.

【7】HANDLING AND STORAGE

Handling

Technical measure : Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agent. Use with local exhaust ventilation.

Precautions : Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate stream and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should no be brought contaminated protective equipment and gloves to rest steps. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Storage

Safe Storage conditions : Store away from sunlight in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

Incompatible substances : Strong oxidizing agents

【8】EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure limits :

	ACGIH
Ethanol	STEL 100ppm
Glycerol	TWA 10mg/m3 (vapor)

Personal protective equipment

Respiratory protection : Dust mask
Hand protection : Protection gloves
Eye protection : Protection eyeglasses or chemical safety goggles
Skin and body protection : Long-sleeved work clothes, protective boots
General hygiene considerations : Handle in accordance with good industrial hygiene and safety

【9】PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid
Color : Yellow
Odor : Alcohol odor
Boiling point : No data available (Ethanol : 78℃)
Flammability : Highly flammable liquid and vapor
Upper/lower flammability or explosive limits : Ethanol (Ethanol : 3.3 ～ 19.0 vol%)
Flash point : 15.5℃
Auto-ignition temperature : No data available (Ethanol : 371℃、Glycerol: 400℃)
Decomposition temperature : No data available
pH : 2.0～2.7
Dynamic viscosity : No data available
Solubilities : Water、ethanol (Very soluble)
Vapor pressure : No data available
Vapor density : No data available
Particle characteristics : No data available

【10】STABILITY AND REACTIVITY

Stability : Stable under recommended storage conditions.
Reactivity : No data available.
Hazardous reactions : may cause ignition on contact with strong oxidizing agent.
Condition to avoid : Extremes of temperature and direct sunlight, heat, flames and sparks
Incompatible material : Strong oxidizing agent

Hazardous decomposition product : Carbon monoxide(CO), Carbon dioxide(CO_2)

【11】TOXICOLOGICAL INFORMATION

Acute toxicity

Oral : Not classified
Dermal : Classification not possible
Inhalation(vapor) : Classification not possible
Inhalation(dusts and mists) : Classification not possible

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethanol	6200mg/kg (rat)	2000mg/kg(rabbit)	6300ppmV(rat) 4h
Glycerol	12600mg/kg(rat)	>10g/kg(rabbit)	N/A
Citric acid	N/A	N/A	N/A

Skin corrosion / irritation : Classification not possible

Ethanol	Not classified
Glycerol	Not data available
Citric acid	Category 2

Serious eye damage / eye irritation : Classification not possible

Ethanol	Category 2A-2B
Glycerol	Category 2B
Citric acid	Category 2A

Respiratory sensitization / skin sensitization

Respiratory sensitization : Classification not possible
Skin sensitization : Classification not possible

Reproductive cell mutagenicity : Category 1B

Ethanol	Category 1B
Glycerol	No data available
Citric acid	No data available

Carcinogenicity : Classification not possible

Ethanol	Not classified
Glycerol	No data available
Citric acid	No data available

Reproductive toxicity : Category 1

Ethanol	Category 1A
Glycerol	No data available
Citric acid	No data available

Specific target organ toxicity - single exposure : Category 3 (Respiratory tract irritation, Narcotic effects)

Ethanol	Category 1A
Glycerol	No data available
Citric acid	No data available

Specific target organ toxicity(repeated exposure) : Category 1 (Liver)
Category 2 (central nervous system)

Ethanol	Category 1(liver), Category 2(central nervous system)
Glycerol	No data available
Citric acid	No data available

Aspiration hazard : No data available

【12】ECOLOGICAL INFORMATION

Ecotoxicity

To algae / aquatic plants	:	Ethanol;	EC50 Chlorella alga 1000mg/L 96h
To Fish	:	Ethanol;	LC50 Oncorhychus mykiss 11200ppm 96h
		Glycerol;	LC50 Gold fish > 5000mg/L 24h
To Crustacean	:	Ethanol;	EC50Daphnia magna 5463mg/L 48h
Other data	:	No data available	
Persistence and degradability	:	Ethanol;	Degree of decomposition 89% by BOD
	:	Glycerol;	Degree of decomposition 77% by BOD (METI Existing chemical safety inspections)
Bioaccumulative potential	:	No data available	
Mobility in soil	:	No data available	
Hazard to the ozone layer	:	No data available	

【13】DISPOSAL CONSIDERATIONS

Waste from residues	:	Disposal should be in accordance with applicable regional, national and local lows and regulations.

【14】TRANSPORT INFORMATION

International regulations

Air	:	Transport in accordance with ICAO-TI/IATA-DRG
Sea	:	Transport in accordance with IMDG-DRG
UN No.	:	1170
Proper shipping name	:	Ethanol solution
UN Classification	:	Class 3
Packing group	:	Ⅱ
Special precaution for user	:	Protect containers from physical damage. Avoid rough handling
	:	Observe all current regulations and standards in your country.

【15】REGULATORY INFORMATION

Japanese regulations

Fire service act	:	Category Ⅳ Inflammable liquids, Class I petroleums, dangerous glade 2, water-soluble
Poisonous and deleterious	:	Dangerous or harmful subject to be indicated their names, etc.
Substance control law	:	Dangerous Articles and harmful substances whose names,etc. Should be notified.
	:	Order for enforcement of industrial safety and health act, Appended table 1 dangerous substances, (iv) Flammable substances.
Regulation for the carriage and strong of dangerous goods in ship	:	Flammable liquids
Civil Aeronautics Law	:	Flammable liquids
Pollutant release and transfer	:	Flammable liquids
register law	:	Not applicable

【16】OTHER INFORMATION

References	:	Encyclopaedia Chemical, Kyoritsu Shuppan Co., Ltd.
	:	NITE(National Institute of Technology and Evaluation(JAPAN))

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