Preparation Date 2018/08/20
Revision Date

Safety Data Sheet (SDS)

Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier	Eagle's MEM "Nissui" ②
Product Code	5901
Company Name	NISSUI PHARMACEUTICAL CO., LTD.
Address	3-24-6 Ueno Taito-ku Tokyo Japan
Company Contact	Pharmaceutical Affairs
Phone Number	03-5846-5613
Fax Number	03-5484-5619
Mail Address	yakuji@nissui-pharm.co.jp
Emergency Phone Number	03-5846-5613

Section 2 – HAZARDS IDENTIFICATION

GHS Classification: No applicable GHS classification data

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Distinction of Substance or Mixture: Mixture

Chemical Name or Generic Name	Concentration or Its Ranges(%)	Formula	ENCS No./ISHL No.		CAS RN
			ENCS No.	ISHL No.	
Sodium Chloride	72.34	NaCl	(1)-236	Existence	7647-14-5
Potassium Chloride	4.26	Unknown	Unknown	Unknown	Unknown
Calcium Chloride	2.13	CaCl2	(1)-176	Existence	10043-52-4
Magnesium Sulfate	0.99	MgSO4	(1)-467	Existence	7487-88-9
Sodium Dihydrogen Phosphate	1.22	Unknown	Unknown	Unknown	Unknown
Glucose	10.64	Unknown	Unknown	Unknown	Unknown
L-Arginine Hydrochloride	1.34	Unknown	Unknown	Unknown	Unknown
L-Cystine Dihydrochloride,H_2O	0.33	Unknown	Unknown	Unknown	Unknown
L-Tyrosine	0.38	Unknown	Unknown	Unknown	Unknown
L-Histidine Hydrochloride,H_2O	0.45	Unknown	Unknown	Unknown	Unknown
L-Isoleucine	0.55	Unknown	Unknown	Unknown	Unknown
L-Leucine	0.55	Unknown	Unknown	Unknown	Unknown
L-Lysine Hydrochloride	0.78	Unknown	Unknown	Unknown	Unknown
L-Methionine	0.16	Unknown	Unknown	Unknown	Unknown
L-Phenylalanine	0.34	Unknown	Unknown	Unknown	Unknown
L-Threonine	0.51	Unknown	Unknown	Unknown	Unknown
L-Tryptophan	0.11	Unknown	Unknown	Unknown	Unknown
L-Valine	0.49	Unknown	Unknown	Unknown	Unknown
Succinic Acid	0.80	C4H6O4	(2)-846	Existence	110-15-6
Sodium Succinate,$6H_2O$	1.06	Unknown	Unknown	Unknown	Unknown
Choline Bitartrate	0.02	Unknown	Unknown	Unknown	Unknown
Folic Acid	0.01	Unknown	Unknown	Unknown	Unknown
Inositol	0.02	C6H12O6	(3)-3265,(8)-520	Existence	87-89-8
Nicotinamide	0.01	Unknown	Unknown	Unknown	Unknown
Calcium Pantothenate	0.01	Unknown	(2)-2739	Existence	137-08-6
Pyridoxal Hydrochloride	0.01	Unknown	Unknown	Unknown	Unknown
Riboflavin	0.001	Unknown	Unknown	Unknown	Unknown
Thiamin Hydrochloride	0.01	Unknown	Unknown	Unknown	Unknown
Biotin	0.0002	Unknown	Unknown	Unknown	Unknown
Kanamycin	0.64	Unknown	Unknown	Unknown	Unknown

Impurities and/or Stabilizing Additives which	No information available

Section 4 – FIRST AID MEASURES

Inhalation	Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
Skin Contact	Call a doctor if you feel unwell. Wash with soap and water. If skin irritation or rash occurs, get medical advice and attention.
Eye Contact	When the ocular stimulation lasts, Seek medical treatment and advice. Rinse cautiously with water for several minutes.
Ingestion	Rinse mouth. Call a doctor if you feel unwell.

Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media	Large fires: Water spray, fog or regular foam. Small fires: Dry chemical, CO2 or water spray. Large fires: Dry chemical, CO2, alcohol-resistant foam or water spray. Small fires: CO2, dry chemical, dry sand, and alcohol-resistant foam. Large fires: Water spray, fog or alcohol-resistant foam. Non-combustible, substance itself does not burn. Use extinguishing agent suitable for type of surrounding fire. DRY sand, graphite powder, dray sodium chloride based exdinguishers, G-1 or Met-L-X powder. Small fires: Dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media	Straight streams. Water, foam or CO2.
Specific Hazards	Fire may produce irritating, corrosive and/or toxic gases. Containers may explode when heated. Fire may produce irritating and/or toxic gases. Containers may explode when heated or if contaminated with water. May be ignited by friction, heat, sparks or flames. Some of these materials will burn with intense heat. Dusts or fumes may form explosive mixtures in air. Containers may explode when heated. Hydrogen gas may be generated if using water to extiguish a metal fire. Particularly in an enclosed environment (building, cargo warehouse), extremely dangerous explosion may occur.
Specific Fire Fighting	Move containers from fire area if you can do it without risk.

Cool containers with flooding quantities of water until well after fire is out.
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
For massive fire, use unmanned hose holders or monitor nozzles.; if this is impossible, withdraw from area and let fire burn.
Do not get water inside containers.
Confining and smothering metal fires is preferable rather than applying water.
If impossible to extinguish, protect surroundings and allow fire to burn itself out.

Protection of Fire Fighter: In fire fighting, wear respiratory protection and chemical protective clothing.

Section 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Do not touch or walk through spilled material.

Isolate the site as a leak area by providing a zone that has an appropriate width to all directions.

Keep unauthorized personnel away.
Stay upwind.
Wear appropriate personal protective equipment (Refer to "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION") and avoid inhalation or contact with eyes and skin.
Keep out of low areas.
Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Ventilate closed spaces before entering.

Environmental Precautions: Do not release into the environment.

Pay attention not to cause the influence on the environment by discharging into rivers.
This product is water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

Methods and Equipment for Containment and: All equipment used when handling the product must be grounded.
Stop leak if you can do it without risk.
Small spills; cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

For Chlorosilanes; use AFFF alcohol-resistant medium expansion foam to reduce vapors.
Allow material to solidify, and scrape up.
This material creates a fire hazard because it floats on water. If possible, try to contain floating material.

After removal, flush contaminated area thoroughly with water.

		Vapor can be controlled using a water fog. Water streams should not be directed to the liquid as this will cause the liquid to boil and generate more vapor.
		Reduce airborne dust and prevent scattering by moistening with water. Small spills; Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
		Collect the leakage by scraping up and put it into an empty container that can be closed tightly. Dispose of it later. Vacuum or sweep up material and place in a disposal container. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
		Remove from water surface by skimming or with suitable absorbents. Do not use dispersants.
Prevention Measures for Secondary Accidents		Removes all ignition sources promptly. (Prohibition of smoking, sparks, and flames in the surrounding area).
		Prevent flowing into drain, sewage, basement, and closed area. Do not get water inside containers. Prevent dispersion by covering with plastic sheets.
		Remove thoroughly since the smooth and slippery surface will be formed on the floor.

Section 7 - HANDLING AND STORAGE

Handling	Technical Measures	Provide ventilation system and use necessary personal protective equipment as described in "Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION".
	Precautions for Safe Handling	Prohibit use of heat, sparks, and fire in the surrounding area. Wash hand thoroughly after handling. Avoid swallowing. Avoid contact with skin. Avoid breathing gas.
	Prevents Handling of Incompatible	Refer to "Section 10 - STABILITY AND REACTIVITY".
	Specific Hygiene Measures	Wash hand thoroughly after handling.
Storage Precautionary Statements	Conditions for Safe Storage	The storage facility should be provided with necessary lighting, lighting equipment, and ventilator to store and handle dangerous goods. The storage facility should be designed with fire-proof construction and beams should use a non-combustible material. The roof of a storage facility should be made of a non-combustible material and use metals or other lightweight non-combustible materials. No ceiling should be installed.

	The storage floor should be protected from water penetration, or should have water-proof construction. Refer to "Section 10 - STABILITY AND REACTIVITY". No specific technical measures are required. Keep away from heat, sparks, open flames and hot surfaces. No smoking. Store away from oxidants. Store in a well-ventilated place keeping cool. Store in a tightly closed container.
Material Used in Packaging/Containers	Use containers prescribed in the "Fire Service Law (Japan)" and the "UN Transport Regulations". Use the containers prescribed in the "Fire Service Law (Japan)". Use the containers prescribed in the "UN Transport Regulations". Packaging materials and containers are not legislated, but use sturdy and closed-type containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

	Japan Administration Level	Exposure Limits (Japan Society for	Exposure Limits (ACGIH)
Sodium Chloride	—	—	—
Potassium Chloride	—	—	—
Calcium Chloride	—	—	—
Magnesium Sulfate	—	—	—
Sodium Dihydrogen Phosphate	—	—	—
Glucose	—	—	—
L-Arginine Hydrochloride	—	—	—
L-Cystine Dihydrochloride,H_2O	—	—	—
L-Tyrosine	—	—	—
L-Histidine Hydrochloride,H_2O	—	—	—
L-Isoleucine	—	—	—
L-Leucine	—	—	—
L-Lysine Hydrochloride	—	—	—
L-Methionine	—	—	—
L-Phenylalanine	—	—	—
L-Threonine	—	—	—
L-Tryptophan	—	—	—
L-Valine	—	—	—
Succinic Acid	—	—	—
Sodium Succinate,$6H_2O$	—	—	—
Choline Bitartrate	—	—	—
Folic Acid	—	—	—
Inositol	—	—	—
Nicotinamide	—	—	—
Calcium Pantothenate	—	—	—
Pyridoxal Hydrochloride	—	—	—
Riboflavin	—	—	—
Thiamin Hydrochloride	—	—	—
Biotin	—	—	—
Kanamycin	—	—	—

Engineering Controls	Use explosion-proof electrical, ventilating and lighting equipment. No special ventilation requirements. Facilities storing or utilizing this product should be equipped with an eyewash facility and safety shower.
Personal Protective Equipment	No information available

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Physical State	solid
	Form	solid (powder)
	Colour	Light yellow
Odour		No data available
Odour threshold		No data available
pH		4.20～4.40
Melting Point/Freezing Point		No data available
Initial Boiling Point and Boiling Ranges		No data available
Flash Point		No data available
Evaporation Rate		No data available
Flammability (solid, gas)		No data available
Flammability or Explosive Limits	Lower Limit	No data available
	Upper Limit	No data available
Vapour Pressure		No data available
Vapour Density		No data available
Specific Gravity (Density)		No data available
Solubility		No data available
Partition Coefficient : n-Octanol/Water		No data available
Auto-Ignition Temperature		No data available
Decomposition Temperature		No data available
Viscosity		No data available
Kinematic viscosity		No data available

Section 10 - STABILITY AND REACTIVITY

Reactivity	No information available
Chemical stability	No information available
Possibility of Hazardous Reaction	No information available
Conditions to Avoid	No information available
Incompatible Substances or Mixtures	No information available
Hazardous Decomposition Products	No information available

Section 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity	Oral	Unable to classify due to insufficient data.
	Dermal	Unable to classify due to insufficient data.
	Inhalation	(gas) Does not fall under gas based on GHS definitions.
		(vapour) Unable to classify due to insufficient data.
		(dust and mist) Unable to classify due to insufficient data.
Skin Corrosion/Irritation		Unable to classify due to insufficient data.
Serious eye damage/eye irritation		Unable to classify due to insufficient data.
Respiratory or Skin Sensitization		(respiratory)
		Unable to classify due to insufficient data.
		(skin) Unable to classify due to insufficient data.
Germ Cell Mutagenicity		Unable to classify due to insufficient data.
Carcinogenicity		Unable to classify due to insufficient data.
Reproductive Toxicity		(Reproductive toxicity)
		Unable to classify due to insufficient data.
		(Reproductive toxicity, effects on or via lactation)
		Unable to classify due to insufficient data.
Specific target organ toxicity (single exposure)		Unable to classify due to insufficient data.
Specific target organ toxicity (repeated exposure)		Unable to classify due to insufficient data.
Aspiration Hazard		Classified as Classification not possible since the kinematic viscosity is unknown.

Section 12 – ECOLOGICAL INFORMATION

Hazardous to the aquatic environment (acute)	Classified as Not classified since the sum of (M × 100 × Category 1) + (10 × Category 2) + Category 3 ingredients is 0%.
	Changed from Not classified to Classification not possible since the mixture contains unknown ingredients.
Hazardous to the aquatic environment (long-term)	Classified as Not classified since the sum of (M × 100 × Category 1) + (10 × Category 2) + Category 3 ingredients is 0%.
	Changed from Not classified to Classification not possible since the mixture contains unknown ingredients.
Hazardous to the ozone layer	Unable to classify due to insufficient data.

Section 13 – DISPOSAL CONSIDERATIONS

Residual Waste	Before disposal, make the wastes harmless, stabilized, and neutralized, and minimize danger and toxicity of the wastes.

		Disposal should be in accordance with applicable regulations and standards by the respective local governments. Commission a waste disposal company, or a local public body who are licensed by local or regional government, to dispose of the material. When commissioning the disposal to a disposal company, notify the danger and toxicity thoroughly to the company. Comply with the standards for The Special Control Industrial Wastes under the Waste Disposal Public Cleansing Law (Japan) to dispose of the concerned wastes. Do not release waste liquid containing the product and used water for cleansing into rivers, etc., or do not discharge the concerned wastes intact for reclamation.
Contaminated Container and Packaging		Recycle containers after cleansing, or carry out the disposal under the related laws and regulations and the standards of the local governments. In case of disposal of empty containers, remove the content thoroughly.

Section 14 – TRANSPORT INFORMATION

International Regulations	Regulatory Information by Sea	Not regulated
	Marine Pollutant	Not applicable
	Transport in bulk according to MARPOL 73/78,Annex Ⅱ,and	Not applicable
	Regulatory Information by Air	Not regulated
Regulations in Japan	Regulatory Information by Road	Not regulated
	Regulatory Information by Sea	Not regulated
	Marine Pollutant	Not applicable
	Transport in bulk according to MARPOL 73/78,Annex Ⅱ,and	Not applicable
	Regulatory Information by Air	Not regulated
Emergency Response Guide Number		None

Section 15 – REGULATORY INFORMATION

No main regulations

Section 16 – OTHER INFORMATION

Information Contact	No information available