

MATERIAL SAFETY DATA SHEET

SECTION 1 - Product and Company Information

Product name: FFPE miRNA ISH Pretreatment Solution
Company: Abnova (Taiwan) Corporation
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SECTION 2 - Hazards Identification

Classification of the substance or mixture

Importance and danger are harmful:

Especially none

Important symptom:

Especially none

SECTION 3 - Composition/Information on Ingredient

Mixtures

Element name	Chemical characteristic	CAS number	Content
Citric Acid Hydrate	C ₆ H ₈ O ₇ · H ₂ O	5949-29-1	5-10%
Closed	Closed	Closed	90-95%

SECTION 4 - First aid measures

General initial allowance: When the accident happens or it is unpleasant, the evaluation by a doctor is received at once.

When inhaling: Receive the evaluation by a doctor when fresh air is supplied, and the symptom is seen.

When adhering to the skin: Wash in water.

When catching one's eye: Rinse under the stream while opened one's eyes for several

minutes and receive the evaluation by a doctor.

When swallowing: Receive the evaluation by a doctor when the symptom continues.

The most important symptom: Information none.

It protects it though the emergency allowance is done: The rescuer wears the protective equipment like the rubber glove and the sealing up goggle, etc.

SECTION 5 - Firefighting measures

Extinguishing media: Fogged bubble/alcohol-proof of bubble powdery carbon dioxide dryness sand is used for a fire.

Extinguishing media that do not use it: Information none.

The peculiarity and danger are harmful concerning the measures at a fire: In a fire, the gas with strong stimulation and hazardous property might be generated by pyrolysis or combustion. Poisonous smoke, above mentioned or gas generated when burning: Carbon monoxide.

Peculiar extinction method: The container is promptly moved to the safe place for a fire in the surrounding. It waters the container and surroundings when it is not possible to move and it cools. A powder, carbon dioxide, and dry sand, etc. are used for an initial fire. It is effective to intercept air by using the fire foam etc. for a large-scale fire.

Protection of the person who extinguishes fire: The extinction work pursuer wears an appropriate armor.

SECTION 6 - Accidental release measures

Notes of human body: Refer to section 8.

Protective equipment and emergency measure: It makes it to off-limits excluding parties concerned. An appropriate protective equipment is worn.

Notes of environment: Do not infiltrate it to the drainpipe, the soil or the rhizic water.

Collection and neutralizing: Absorb it with the liquid absorbers such as sand, the diatom, the acid joint material, and a general absorption material and sawdust. Use the neutralizer.

According to section 13 of method of abandoning polluted material. Confirm ventilation is enough.

SECTION 7 - Handling and storage

Handling

Technical measures: The equipment measures described in "8. the exposure prevention

protection device" are done, and the protective equipment is worn.

Local ventilation and general ventilation: Limited part ventilator described in "8. exposure prevention protection device". The general ventilation is done.

Notes: The device, the machine or the limited part ventilator sealed up is used. Handling in the outdoors works from the windward as much as possible. To generate neither the aerosol nor dust recklessly, it handles it.

Safety treatment notes: The excessive impact is given to the container, and uncouth treatments of making them fall or drag, etc. are not done.

Storage

The equipment of a necessary lighting, the lighting, and the ventilation to store or to handle dangerous articles in the inventory location is installed.

Appropriate keeping condition: It avoids direct sunlight, it stops closely, and it keeps it in the cool dark place.

Safe container wrapping material: The glass, polystyrene, and polypropylene, etc.

SECTION 8 - Exposure Controls/Personal Protection

Equipment measures: Making to sealing up or the local exhaust ventilation of the source is set up at use in the indoor workplace. The safety shower, the washroom, and the facial cleansing equipment are installed near the handling place, and the position is displayed plainly.

Management density: It is not set.

Allowable concentration:

Dangerous, harmful element	ACGIH (2008 versions)
Citric Acid Hydrate	It is not set.

Protective equipment

Protective equipment of respiratory organ	It is indoors of the ventilation well unnecessary. Take an appropriate preventive action when the density of the chemical exceeds the exposure limit.
Protective equipment of hand	Wear impermeable gloves.
Protective eyewear	Wear the sticking type safety glasses etc.
Protective equipment of skin and body	It is preferable to wear an experiment clothes or other appropriate protection clothes.
Appropriate sanitary requirement	Neither food nor the drink are brought close, and, and, it doesn't eat and drink. Undress polluted clothes at once. Wash your hand at before break time and the end of work.

SECTION 9 - Physical and chemical properties

Shape:	Colorless crystal
Color:	colorlessness
Smell:	scentless
pH:	Information none
Melting point/freezing point:	135-153°C
Boiling point, initial boiling point, and range of boil:	Information none
Flash point inflammability:	None
Autogenous ignition temperature (fire point) :	None
Upper bound/lower bound in combustion or range of explosion:	Explosion hazard none
Vapor pressure:	Information none
Steam density:	Information none
Specific gravity (relative density):	1.247 g/cm ³ (20°C)
Dissolubility:	To water: The miscibility is not or is low.
N-octanol-water partition coefficient	Information none
Decomposition temperature:	Information none

SECTION 10 - Stability and reactivity

Stability: If it is use the same as specifications, it doesn't resolve it.

Dangerous, harmful, reactive possibility: It is likely to react when coming in contact with the oxidant.

Condition that should be avoided: Contact of sunlight, heat, and hazardous material.

Dangerous, harmful resolution product: A dangerous, harmful resolution product is not reported.

SECTION 11 - Toxicological information

As a product

Acute toxicity: Information none

Skin corrosivity/stimulation: Information none

Serious damage/stimulation to eyes: The vigorous stimulation is shown, and there is danger that causes eyes serious damage.

Respiratory organ sensitizing potential or skin: The feeling work character feeling work character is not reported.

Extra information: A strong causticity is shown in the mouth and the throat by swallowing, and the danger of the gullet and the perforation of stomach is beckoned.

SECTION 12 - Ecological information

Do not infiltrate the product that has not been diluted or the product that doesn't neutralize to drainage or the drainage trench.

SECTION - 13 Disposal Considerations

This product does the consignment processing to the waste management trader who obtains permission.

SECTION 14 - Transport information

Overland transportation (ADR/RID): As a mixture, the substance is subject to no limitations.

Transatlantic transportation (IMDG): As a mixture, the substance is subject to no limitations.

Air transportation (ICAO/IATA): As a mixture, the substance is subject to no limitations.

SECTION 15 - Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16 - Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Abnova shall not be held liable for any damage resulting from handling or from contact with the above product.