

SAFETY DATA SHEET

Total RNA Isolation Mini Kit, Part Number 5185-6000

Section 1. Identification

Product identifier : Total RNA Isolation Mini Kit, Part Number 5185-6000
Part no. (chemical kit) : 5185-6000
Part no. : Nuclease-Free Water 5190-0432
 Lysis Solution 5190-0434
 Wash Solution 5190-0433

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Analytical chemistry.
 Nuclease-Free Water 25 ml
 Lysis Solution 50 ml
 Wash Solution 12 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Lysis Solution

H302 ACUTE TOXICITY (oral) - Category 4
 H315 SKIN CORROSION/IRRITATION - Category 2
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Lysis Solution Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 47.3%

GHS label elements

Hazard pictograms : Lysis Solution



Signal word : Nuclease-Free Water No signal word.
 Lysis Solution WARNING
 Wash Solution No signal word.

Hazard statements : Nuclease-Free Water No known significant effects or critical hazards.
 Lysis Solution H302 - Harmful if swallowed.
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 Wash Solution No known significant effects or critical hazards.

Precautionary statements

Section 2. Hazard(s) identification

Prevention	: Nuclease-Free Water Lysis Solution	Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling. Not applicable.
Response	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. Not applicable.
Storage	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. Not applicable. Not applicable.
Disposal	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
Supplemental label elements		
Additional warning phrases	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: Nuclease-Free Water Lysis Solution Wash Solution	None known. None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	: Nuclease-Free Water Lysis Solution Wash Solution	Substance Mixture Mixture
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CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
Nuclease-Free Water water	100	7732-18-5
Lysis Solution Guanidinium chloride	≥30 - ≤60	50-01-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Nuclease-Free Water	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Lysis Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	Wash Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Nuclease-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Lysis Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Wash Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Nuclease-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Lysis Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Wash Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Nuclease-Free Water	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Lysis Solution	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never

Section 4. First aid measures

Wash Solution

give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. Causes serious eye irritation. No known significant effects or critical hazards.
Inhalation	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. Causes skin irritation. No known significant effects or critical hazards.
Ingestion	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. Harmful if swallowed. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Nuclease-Free Water Lysis Solution	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
	Wash Solution	No specific data.
Inhalation	: Nuclease-Free Water Lysis Solution Wash Solution	No specific data. No specific data. No specific data.
Skin contact	: Nuclease-Free Water Lysis Solution	No specific data. Adverse symptoms may include the following: irritation redness
	Wash Solution	No specific data.
Ingestion	: Nuclease-Free Water Lysis Solution Wash Solution	No specific data. No specific data. No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Nuclease-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Lysis Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Wash Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: Nuclease-Free Water Lysis Solution Wash Solution	No specific treatment. No specific treatment. No specific treatment.

Section 4. First aid measures

Protection of first-aiders	: Nuclease-Free Water	No action shall be taken involving any personal risk or without suitable training.
	Lysis Solution	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Wash Solution	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: Nuclease-Free Water	Use an extinguishing agent suitable for the surrounding fire.
	Lysis Solution	Use an extinguishing agent suitable for the surrounding fire.
	Wash Solution	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Nuclease-Free Water	None known.
	Lysis Solution	None known.
	Wash Solution	None known.

Specific hazards arising from the chemical

: Nuclease-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
Lysis Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Wash Solution	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

: Nuclease-Free Water	No specific data.
Lysis Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
Wash Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds

Special protective actions for fire-fighters

: Nuclease-Free Water	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Lysis Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Wash Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Firefighting measures

Special protective equipment for fire-fighters	: Nuclease-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Lysis Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Wash Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Nuclease-Free Water	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Lysis Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Wash Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
For emergency responders	: Nuclease-Free Water	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Lysis Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Wash Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	: Nuclease-Free Water	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Lysis Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Wash Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up : Nuclease-Free Water

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Lysis Solution

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Wash Solution

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Nuclease-Free Water

Put on appropriate personal protective equipment (see Section 8).

Lysis Solution

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Wash Solution

Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Nuclease-Free Water

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Lysis Solution

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Wash Solution

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Nuclease-Free Water

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Lysis Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Wash Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls and personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Nuclease-Free Water Lysis Solution Wash Solution	Liquid. Liquid. Liquid.
Colour	: Nuclease-Free Water Lysis Solution Wash Solution	Colourless. Not available. Not available.
Odour	: Nuclease-Free Water Lysis Solution Wash Solution	Odourless. Not available. Not available.
Odour threshold	: Nuclease-Free Water Lysis Solution Wash Solution	Not available. Not available. Not available.
pH	: Nuclease-Free Water Lysis Solution Wash Solution	7 7.5 7.5
Melting point/freezing point	: Nuclease-Free Water Lysis Solution Wash Solution	0°C (32°F) Not available. 0°C (32°F)
Boiling point, initial boiling point, and boiling range	: Nuclease-Free Water Lysis Solution Wash Solution	100°C (212°F) Not available. 100°C (212°F)
Flash point	: Nuclease-Free Water Lysis Solution Wash Solution	Not available. Not available. Not available.
Evaporation rate	: Nuclease-Free Water Lysis Solution Wash Solution	Not available. Not available. Not available.

Section 9. Physical and chemical properties and safety characteristics

Flammability	: Nuclease-Free Water	Not applicable.
	Lysis Solution	Not applicable.
	Wash Solution	Not applicable.
Lower and upper explosion limit/flammability limit	: Nuclease-Free Water	Not available.
	Lysis Solution	Not available.
	Wash Solution	Not available.
Vapour pressure	: <input checked="" type="checkbox"/> Nuclease-Free Water	2.3 kPa (17.5 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C (122°F)]

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<input checked="" type="checkbox"/> Lysis Solution						
water	17.5	2.3	-	92.258	12.3	-
Wash Solution						
water	17.5	2.3	-	92.258	12.3	-

Relative vapour density	: Nuclease-Free Water	0.62 [Air = 1]
	Lysis Solution	Not available.
	Wash Solution	Not available.

Relative density	: Nuclease-Free Water	1
	Lysis Solution	Not available.
	Wash Solution	Not available.

Solubility(ies)	: Media	Result
	<input checked="" type="checkbox"/> Nuclease-Free Water	
	water	Soluble
	Lysis Solution	
	water	Soluble
	Wash Solution	
	water	Soluble

Partition coefficient: n-octanol/water	: <input checked="" type="checkbox"/> Nuclease-Free Water	-1.38
	Lysis Solution	Not applicable.
	Wash Solution	Not applicable.

Auto-ignition temperature	: <input checked="" type="checkbox"/> Nuclease-Free Water	Not applicable.
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Decomposition temperature	: Nuclease-Free Water	Not available.
	Lysis Solution	Not available.
	Wash Solution	Not available.

Viscosity	: Nuclease-Free Water	Not available.
	Lysis Solution	Not available.
	Wash Solution	Not available.

Particle characteristics

Median particle size	: <input checked="" type="checkbox"/> Nuclease-Free Water	Not applicable.
	Lysis Solution	Not applicable.
	Wash Solution	Not applicable.

Section 10. Stability and reactivity

Reactivity	: Nuclease-Free Water	No specific test data related to reactivity available for this product or its ingredients.
	Lysis Solution	No specific test data related to reactivity available for this product or its ingredients.
	Wash Solution	No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

Chemical stability	: Nuclease-Free Water Lysis Solution Wash Solution	The product is stable. The product is stable. The product is stable.
Possibility of hazardous reactions	: Nuclease-Free Water Lysis Solution Wash Solution	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Nuclease-Free Water Lysis Solution Wash Solution	No specific data. No specific data. No specific data.
Incompatible materials	: Nuclease-Free Water Lysis Solution Wash Solution	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	: Nuclease-Free Water Lysis Solution Wash Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<input checked="" type="checkbox"/> Lysis Solution Guanidinium chloride	LC50 Inhalation Dusts and mists	Rat - Female	3.181 mg/l	4 hours
	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	475 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> Lysis Solution Guanidinium chloride	Eyes - Moderate irritant	Rabbit	-	81400 ug	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-

Sensitisation

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure	<input checked="" type="checkbox"/> Nuclease-Free Water	Not available.
	Lysis Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
	Wash Solution	Not available.

Potential acute health effects

Eye contact	: Nuclease-Free Water	No known significant effects or critical hazards.
	Lysis Solution	Causes serious eye irritation.
	Wash Solution	No known significant effects or critical hazards.
Inhalation	: Nuclease-Free Water	No known significant effects or critical hazards.
	Lysis Solution	No known significant effects or critical hazards.
	Wash Solution	No known significant effects or critical hazards.
Skin contact	: Nuclease-Free Water	No known significant effects or critical hazards.
	Lysis Solution	Causes skin irritation.
	Wash Solution	No known significant effects or critical hazards.
Ingestion	: Nuclease-Free Water	No known significant effects or critical hazards.
	Lysis Solution	Harmful if swallowed.
	Wash Solution	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Nuclease-Free Water	No specific data.
	Lysis Solution	Adverse symptoms may include the following: pain or irritation watering redness
	Wash Solution	No specific data.
Inhalation	: Nuclease-Free Water	No specific data.
	Lysis Solution	No specific data.
	Wash Solution	No specific data.
Skin contact	: Nuclease-Free Water	No specific data.
	Lysis Solution	Adverse symptoms may include the following: irritation redness
	Wash Solution	No specific data.
Ingestion	: Nuclease-Free Water	No specific data.
	Lysis Solution	No specific data.
	Wash Solution	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

General	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: <input checked="" type="checkbox"/> Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
<input checked="" type="checkbox"/> Lysis Solution Lysis Solution Guanidinium chloride	1004.5 475	N/A N/A	N/A N/A	N/A N/A	6.7 3.181

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> Nuclease-Free Water water	-	-	Readily
Lysis Solution Guanidinium chloride	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
<input checked="" type="checkbox"/> Nuclease-Free Water water	-1.38	-	Low
Lysis Solution Guanidinium chloride	-1.7	-	Low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

New Zealand : All components are listed or exempted.

United States : All components are active or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 27/09/2023

Date of previous issue : 03/08/2020

Version : 6

Key to abbreviations

ADG = Australian Dangerous Goods
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
Lysis Solution ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A	Calculation method Calculation method Calculation method

✔ Indicates information that has changed from previously issued version.

Notice to reader

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