


Section 2. Hazards identification

2.2 GHS label elements

Hazard pictograms	: Lysis Solution	
Signal word	: Nuclease-Free Water Lysis Solution Wash Solution	No signal word. Warning No signal word.
Hazard statements	: Nuclease-Free Water Lysis Solution Wash Solution	No known significant effects or critical hazards. H302 - Harmful if swallowed. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. No known significant effects or critical hazards.
Precautionary statements		
Prevention	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling. Not applicable.
Response	: Nuclease-Free Water Lysis Solution	Not applicable. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. Not applicable.
Disposal	: Nuclease-Free Water Lysis Solution	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. None known. None known. None known.
2.3 Other hazards		
Hazards not otherwise classified	: Nuclease-Free Water Lysis Solution Wash Solution	None known. None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Nuclease-Free Water	Substance
	Lysis Solution	Mixture
	Wash Solution	Mixture

Ingredient name	%	CAS number
Nuclease-Free Water		
water	100	7732-18-5
Lysis Solution		
Guanidinium chloride	≥25 - <50	50-01-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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.

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

Section 4. First aid measures

4.1 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 it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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

Section 4. First aid measures

Skin contact : Nuclease-Free Water

Lysis Solution

Wash Solution

Ingestion : Nuclease-Free Water

Lysis Solution

Wash Solution

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.

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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.

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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.

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 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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Nuclease-Free Water
Lysis Solution
Wash Solution

Inhalation : Nuclease-Free Water
Lysis Solution
Wash Solution

Skin contact : Nuclease-Free Water
Lysis Solution
Wash Solution

Ingestion : 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.

No known significant effects or critical hazards. May cause respiratory irritation.

No known significant effects or critical hazards.

No known significant effects or critical hazards. Causes skin irritation.

No known significant effects or critical hazards.

No known significant effects or critical hazards. Harmful if swallowed.

No known significant effects or critical hazards.

Section 4. First aid measures

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	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing
	Wash Solution	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.

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

Notes to physician	: Nuclease-Free Water Lysis Solution Wash Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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. 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.
Protection of first-aiders	: Nuclease-Free Water Lysis Solution Wash Solution	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Nuclease-Free Water
Lysis Solution
Wash Solution

Use an extinguishing agent suitable for the surrounding fire.
Use an extinguishing agent suitable for the surrounding fire.
Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: Nuclease-Free Water
Lysis Solution
Wash Solution

None known.
None known.
None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

: Nuclease-Free Water
Lysis Solution
Wash Solution

In a fire or if heated, a pressure increase will occur and the container may burst.
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In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products

: Nuclease-Free Water
Lysis Solution

Wash Solution

No specific data.
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

5.3 Advice for firefighters

Special protective actions for fire-fighters

: Nuclease-Free Water

Lysis Solution

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.
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Special protective equipment for fire-fighters

: Nuclease-Free Water

Lysis Solution

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.
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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Section 6. Accidental release measures

6.1 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 spilled material. Put on appropriate personal protective equipment. 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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 spilled material. Put on appropriate personal protective equipment.

Wash Solution

For emergency responders

: Nuclease-Free Water

If specialized 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". If specialized 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". If specialized 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

Wash Solution

6.2 Environmental precautions

: Nuclease-Free Water

Avoid dispersal of spilled 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 spilled 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 spilled 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).

6.3 Methods and materials for containment and cleaning up

Section 6. Accidental release measures

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

7.1 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 vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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

7.2 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 unlabeled 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. Store locked up. 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 unlabeled 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.


7.3 Specific end use(s)

Recommendations

: Nuclease-Free Water
Lysis Solution
Wash Solution

Industrial applications, Professional applications.
Industrial applications, Professional applications.
Industrial applications, Professional applications.

Industrial sector specific solutions


:  Nuclease-Free Water
Lysis Solution
Wash Solution

Not available.
Not available.
Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
 Nuclease-Free Water water	None.
Lysis Solution Guanidinium chloride	None.

Biological exposure indices

No exposure indices known.

Section 8. Exposure controls/personal protection

8.2 Exposure controls

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.

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	Liquid.
	: Lysis Solution	Liquid.
	: Wash Solution	Liquid.
Color	: Nuclease-Free Water	Colorless.
	: Lysis Solution	Not available.
	: Wash Solution	Not available.
Odor	: Nuclease-Free Water	Odorless.
	: Lysis Solution	Not available.
	: Wash Solution	Not available.
Odor threshold	: Nuclease-Free Water	Not available.
	: Lysis Solution	Not available.
	: Wash Solution	Not available.
pH	:	

Section 9. Physical and chemical properties and safety characteristics

	Nuclease-Free Water	7
	Lysis Solution	7.5
	Wash Solution	7.5
Melting point/freezing point	Nuclease-Free Water	0°C (32°F)
	Lysis Solution	Not available.
	Wash Solution	0°C (32°F)
Boiling point, initial boiling point, and boiling range	Nuclease-Free Water	100°C (212°F)
	Lysis Solution	Not available.
	Wash Solution	100°C (212°F)
Flash point	Nuclease-Free Water	Not available.
	Lysis Solution	Not available.
	Wash Solution	Not available.
Evaporation rate	Nuclease-Free Water	Not available.
	Lysis Solution	Not available.
	Wash Solution	Not available.
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.
Vapor pressure	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	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Lysis Solution						
water	17.5	2.3	-	92.258	12.3	-
Wash Solution						
water	17.5	2.3	-	92.258	12.3	-

Relative vapor 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
	Nuclease-Free Water	
	water	Soluble
	Lysis Solution	
	water	Soluble
	Wash Solution	
	water	Soluble

Partition coefficient: n-octanol/water	Nuclease-Free Water	-1.38
	Lysis Solution	Not applicable.
	Wash Solution	Not applicable.
Auto-ignition temperature	Nuclease-Free Water	Not applicable.
Decomposition temperature	Nuclease-Free Water	Not available.
	Lysis Solution	Not available.
	Wash Solution	Not available.

Section 9. Physical and chemical properties and safety characteristics

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


10.1 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.
10.2 Chemical stability	: Nuclease-Free Water	The product is stable.
	Lysis Solution	The product is stable.
	Wash Solution	The product is stable.
10.3 Possibility of hazardous reactions	: Nuclease-Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
	Lysis Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Wash Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Nuclease-Free Water	No specific data.
	Lysis Solution	No specific data.
	Wash Solution	No specific data.
10.5 Incompatible materials	: Nuclease-Free Water	May react or be incompatible with oxidizing materials.
	Lysis Solution	May react or be incompatible with oxidizing materials.
	Wash Solution	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: Nuclease-Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Lysis Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Wash Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information


11.1 Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

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

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
 Lysis Solution Guanidinium chloride	Eyes - Moderate irritant Skin - Severe irritant	Rabbit Rabbit	- -	81400 ug 24 hours 500 mg	- -

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.


Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
 Lysis Solution Guanidinium chloride	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure :  Nuclease-Free Water
Lysis Solution

Wash Solution

Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Not available.

Potential acute health effects

Eye contact : Nuclease-Free Water
Lysis Solution
Wash Solution

Inhalation : Nuclease-Free Water
Lysis Solution
Wash Solution

Skin 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.
No known significant effects or critical hazards.
May cause respiratory irritation.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
Causes skin irritation.
No known significant effects or critical hazards.

Section 11. Toxicological information

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.
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Symptoms related to the physical, chemical and toxicological characteristics

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

Delayed and immediate effects and also 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

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	: 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

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Lysis Solution Lysis Solution Guanidinium chloride	1004.5 475	5286.8 2500	N/A N/A	N/A N/A	6.7 3.181

Section 12. Ecological information

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Nuclease-Free Water water	-	-	Readily
Lysis Solution Guanidinium chloride	-	-	Inherent

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Nuclease-Free Water water	-1.38	-	Low
Lysis Solution Guanidinium chloride	-1.7	-	Low

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

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

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

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
Clean Water Act (CWA) 311: Edetic acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Nuclease-Free Water
Lysis Solution

Wash Solution

Not applicable.
ACUTE TOXICITY (oral) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
(Respiratory tract irritation) - Category 3
Not applicable.

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
Lysis Solution Guanidinium chloride	≥25 - <50	COMBUSTIBLE DUSTS ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

State regulations

- Massachusetts** : None of the components are listed.
New York : None of the components are listed.
New Jersey : None of the components are listed.
Pennsylvania : None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

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.
Canada : All components are listed or exempted.
China : All components are listed or exempted.
Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): All components are listed or exempted.
New Zealand : All components are listed or exempted.
Philippines : All components are listed or exempted.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Thailand : Not determined.
Turkey : Not determined.
United States : All components are active or exempted.
Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
✓ Lysis Solution ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method Calculation method Calculation method Calculation method

History

Date of issue/Date of revision	: 09/27/2023
Date of previous issue	: 08/03/2020
Version	: 6
Key to abbreviations	: 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 : UN = United Nations

✓ Indicates information that has changed from previously issued version.

Notice to reader

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