

SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 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

No known significant effects or critical hazards.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Wash Solution
No known significant effects or critical hazards.

Precautionary statements

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.

Wash Solution

Not applicable.

Response : Nuclease-Free Water
Lysis Solution

Not applicable.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.

Wash Solution

Not applicable.

Storage : Nuclease-Free Water
Lysis Solution
Wash Solution

Not applicable.
Not applicable.
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.

Wash Solution

Not applicable.

Hazardous ingredients : Lysis Solution

guanidinium chloride

Supplemental label elements : Nuclease-Free Water
Lysis Solution
Wash Solution

Not applicable.
Not applicable.
Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Nuclease-Free Water
Lysis Solution
Wash Solution

Not applicable.
Not applicable.
Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Nuclease-Free Water
Lysis Solution
Wash Solution

Not applicable.
Not applicable.
Not applicable.

Tactile warning of danger : Nuclease-Free Water
Lysis Solution
Wash Solution

Not applicable.
Not applicable.
Not applicable.

2.3 Other hazards

Total RNA Isolation Mini Kit, Part Number 5185-6000

SECTION 2: Hazards identification

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

	PBT	P	B	T	vPvB	vP	vB
<input checked="" type="checkbox"/> Nuclease-Free Water							
Not applicable (Inorganic)		N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

Lysis Solution This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
 Wash Solution This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification

Nuclease-Free Water None known.
 Lysis Solution None known.
 Wash Solution None known.

SECTION 3: Composition/information on ingredients

3.1 Substances : Nuclease-Free Water Mono-constituent substance
 Lysis Solution Mixture
 Wash Solution Mixture

Product/ingredient name	Identifiers	%	Classification	Type
<input checked="" type="checkbox"/> Nuclease-Free Water water	UK (GB) REACH #: Annex IV REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[1]
<input checked="" type="checkbox"/> Lysis Solution guanidinium chloride	EC: 200-002-3 CAS: 50-01-1 Index: 607-148-00-0	≥25 - ≤50	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type
 Nuclease-Free Water [1] Constituent
 Lysis Solution [1] Substance classified with a health or environmental hazard
 Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of 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.

SECTION 4: First aid measures

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 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 Solution	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.
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.

4.2 Most important symptoms and effects, both acute and delayed

SECTION 4: First aid measures

Over-exposure signs/symptoms

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Nuclease-Free Water	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.
	Lysis Solution	
	Wash Solution	
Specific treatments	: Nuclease-Free Water	No specific treatment.
	Lysis Solution	No specific treatment.
	Wash Solution	No specific treatment.

SECTION 5: Firefighting measures

5.1 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.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: 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 combustion 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




SECTION 5: Firefighting measures

5.3 Advice for firefighters

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.
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

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 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".
6.2 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).

SECTION 6: Accidental release measures

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).
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6.3 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.

6.4 Reference to other sections	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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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 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.

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage

Storage	: 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.

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

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

: Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
Lysis Solution guanidinium chloride	DNEL	Long term Oral	0.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.87 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	1 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	3.5 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	10.5 mg/m ³	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

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

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.

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.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

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.								
Melting point/freezing point	: Nuclease-Free Water Lysis Solution Wash Solution	0°C Not available. 0°C								
Initial boiling point and boiling range	: Nuclease-Free Water Lysis Solution Wash Solution	100°C Not available. 100°C								
Flammability	: Nuclease-Free Water Lysis Solution Wash Solution	Not applicable. Not applicable. Not applicable.								
Upper/lower flammability or explosive limits	: Nuclease-Free Water Lysis Solution Wash Solution	Not available. Not available. Not available.								
Flash point	: <input checked="" type="checkbox"/> Nuclease-Free Water Lysis Solution Wash Solution	Not available. Not available. Not available.								
Auto-ignition temperature	: <input checked="" type="checkbox"/> Nuclease-Free Water	Not applicable.								
Decomposition temperature	: 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								
Viscosity	: Nuclease-Free Water Lysis Solution Wash Solution	Not available. Not available. Not available.								
Solubility(ies)	: <table border="1" data-bbox="466 1612 1514 1852"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Nuclease-Free Water water</td> <td>Soluble</td> </tr> <tr> <td><input checked="" type="checkbox"/> Lysis Solution water</td> <td>Soluble</td> </tr> <tr> <td><input checked="" type="checkbox"/> Wash Solution water</td> <td>Soluble</td> </tr> </tbody> </table>	Media	Result	<input checked="" type="checkbox"/> Nuclease-Free Water water	Soluble	<input checked="" type="checkbox"/> Lysis Solution water	Soluble	<input checked="" type="checkbox"/> Wash Solution water	Soluble	
Media	Result									
<input checked="" type="checkbox"/> Nuclease-Free Water water	Soluble									
<input checked="" type="checkbox"/> Lysis Solution water	Soluble									
<input checked="" type="checkbox"/> Wash Solution water	Soluble									
Partition coefficient: n-octanol/water	: <input checked="" type="checkbox"/> Nuclease-Free Water Lysis Solution Wash Solution	-1.38 Not applicable. Not applicable.								
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]								

SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20°C			Vapour 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	-

Evaporation rate : Nuclease-Free Water Not available.
 Lysis Solution Not available.
 Wash Solution Not available.

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

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

Explosive properties : Nuclease-Free Water Not available.
 Lysis Solution Not available.
 Wash Solution Not available.

Oxidising properties : Nuclease-Free Water Not available.
 Lysis Solution Not available.
 Wash Solution Not available.

Particle characteristics

Median particle size : Nuclease-Free Water Not applicable.
 Lysis Solution Not applicable.
 Wash Solution Not applicable.

9.2 Other information

No additional information.

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.

SECTION 10: Stability and reactivity

10.5 Incompatible materials : Nuclease-Free Water May react or be incompatible with oxidising materials.
 Lysis Solution May react or be incompatible with oxidising materials.
 Wash Solution May react or be incompatible with oxidising 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

Product/ingredient name	Result	Species	Dose	Exposure
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	-

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)
Lysis Solution Lysis Solution guanidinium chloride	1004.5 475	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Irritation/Corrosion

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

Sensitiser

Conclusion/Summary : 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)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

SECTION 11: Toxicological information

Information on likely routes of exposure : Nuclease-Free Water Not available.
 Lysis Solution Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
 Wash Solution Not available.

Potential acute health effects

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.

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.

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.

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.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Nuclease-Free Water No specific data.
 Lysis Solution No specific data.
 Wash Solution No specific data.

Ingestion : 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.

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.

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

Conclusion/Summary : Not available.

General : 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.

Carcinogenicity : 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.

Mutagenicity : 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.

Total RNA Isolation Mini Kit, Part Number 5185-6000

SECTION 11: Toxicological information

Reproductive toxicity : 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.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

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.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Nuclease-Free Water water	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : 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.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Total RNA Isolation Mini Kit, Part Number 5185-6000

SECTION 13: Disposal considerations

Special precautions : 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 spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

Additional information

14.6 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.

14.7 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 UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product / Ingredient name	Identifiers	Status
Lysis Solution Lysis Solution	-	3

SECTION 15: Regulatory information

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

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

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

United States : All components are active or exempted.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> Lysis Solution Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	Calculation method Calculation method Calculation method

Full text of abbreviated H statements

Total RNA Isolation Mini Kit, Part Number 5185-6000

SECTION 16: Other information

Lysis Solution

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

[Full text of classifications](#)

Lysis Solution

Acute Tox. 4	ACUTE TOXICITY - Category 4
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2

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Version : 3

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