

Section 2. Hazards identification

Hazard statements	DNA Extraction Buffer	Danger
	Wash Buffer (2X)	No signal word.
	DNA Extraction Buffer	H302 + H332 - Harmful if swallowed or if inhaled.
		H314 - Causes severe skin burns and eye damage.
Precautionary statements		H412 - Harmful to aquatic life with long lasting effects.
	Wash Buffer (2X)	No known significant effects or critical hazards.
Prevention	DNA Extraction Buffer	P280 - Wear protective gloves, protective clothing and eye or face protection.
		P273 - Avoid release to the environment.
		P261 - Avoid breathing vapor.
		P270 - Do not eat, drink or smoke when using this product.
		P264 - Wash thoroughly after handling.
	Wash Buffer (2X)	Not applicable.
Response	DNA Extraction Buffer	P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.
		P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
		Rinse mouth. Do NOT induce vomiting.
		P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.
		Rinse skin with water. Immediately call a POISON CENTER or doctor.
		P363 - Wash contaminated clothing before reuse.
		P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
	Wash Buffer (2X)	Not applicable.
Storage	DNA Extraction Buffer	Not applicable.
	Wash Buffer (2X)	Not applicable.
Disposal	DNA Extraction Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Not applicable.
Supplemental label elements	Wash Buffer (2X)	Keep container tightly closed. Do not breathe vapor or spray. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.
	DNA Extraction Buffer	None known.
	Wash Buffer (2X)	
2.3 Other hazards		
	DNA Extraction Buffer	Causes respiratory tract burns. Causes digestive tract burns.
Hazards not otherwise classified	Wash Buffer (2X)	None known.

Section 3. Composition/information on ingredients

Substance/mixture	DNA Extraction Buffer	Mixture
	Wash Buffer (2X)	Mixture

Ingredient name	%	CAS number
DNA Extraction Buffer		
Guanidinium thiocyanate	≥25 - ≤50	593-84-0

Section 3. Composition/information on ingredients

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 :  DNA Extraction Buffer

Wash Buffer (2X)

Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

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 :  DNA Extraction Buffer

Wash Buffer (2X)

Get medical attention immediately. Call a poison center or physician. 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. 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact :  DNA Extraction Buffer

Wash Buffer (2X)

Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. 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.

Section 4. First aid measures

Ingestion	: DNA Extraction Buffer	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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.
	Wash Buffer (2X)	

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: DNA Extraction Buffer Wash Buffer (2X)	Causes serious eye damage. No known significant effects or critical hazards.
Inhalation	: DNA Extraction Buffer Wash Buffer (2X)	Harmful if inhaled. Corrosive to the respiratory system. No known significant effects or critical hazards.
Skin contact	: DNA Extraction Buffer Wash Buffer (2X)	Causes severe burns. No known significant effects or critical hazards.
Ingestion	: DNA Extraction Buffer Wash Buffer (2X)	May cause burns to mouth, throat and stomach. Harmful if swallowed. Corrosive to the digestive tract. Causes burns. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: DNA Extraction Buffer Wash Buffer (2X)	Adverse symptoms may include the following: pain watering redness No specific data.
Inhalation	: DNA Extraction Buffer Wash Buffer (2X)	Adverse symptoms may include the following: respiratory tract irritation coughing No specific data.
Skin contact	: DNA Extraction Buffer Wash Buffer (2X)	Adverse symptoms may include the following: pain or irritation redness blistering may occur No specific data.
Ingestion	: DNA Extraction Buffer Wash Buffer (2X)	Adverse symptoms may include the following: stomach pains No specific data.

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

Section 4. First aid measures

Notes to physician	: DNA Extraction Buffer	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 Buffer (2X)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: DNA Extraction Buffer Wash Buffer (2X)	No specific treatment. No specific treatment.
Protection of first-aiders	:  DNA Extraction Buffer	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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Wash Buffer (2X)	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	: DNA Extraction Buffer Wash Buffer (2X)	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: DNA Extraction Buffer Wash Buffer (2X)	None known. None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: DNA Extraction Buffer Wash Buffer (2X)	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: DNA Extraction Buffer Wash Buffer (2X)	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds Decomposition products may include the following materials: halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : DNA Extraction Buffer

Wash Buffer (2X)

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.

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 : DNA Extraction Buffer

Wash Buffer (2X)

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.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :  DNA Extraction Buffer

Wash Buffer (2X)

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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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. Put on appropriate personal protective equipment.

For emergency responders : DNA Extraction Buffer

Wash Buffer (2X)

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".

6.2 Environmental precautions : DNA Extraction Buffer

Wash Buffer (2X)

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). Water polluting material. May be harmful to the environment if released in large quantities.

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 : DNA Extraction Buffer

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 Buffer (2X)

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 :  DNA Extraction Buffer

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. 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 Buffer (2X)

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

Advice on general occupational hygiene : DNA Extraction Buffer

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. 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 Buffer (2X)

7.2 Conditions for safe storage, including any incompatibilities :  DNA Extraction Buffer

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 Buffer (2X)

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from

Section 7. Handling and storage

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	: DNA Extraction Buffer Wash Buffer (2X)	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	:  DNA Extraction Buffer Wash Buffer (2X)	Not available. Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
 DNA Extraction Buffer Guanidinium thiocyanate	None.

Biological exposure indices

No exposure indices known.

8.2 Exposure controls

Appropriate engineering controls	:  Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Section 8. Exposure controls/personal 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** : DNA Extraction Buffer Liquid.
Wash Buffer (2X) Liquid.
- Color** : DNA Extraction Buffer Not available.
Wash Buffer (2X) Not available.
- Odor** : DNA Extraction Buffer Not available.
Wash Buffer (2X) Not available.
- Odor threshold** : DNA Extraction Buffer Not available.
Wash Buffer (2X) Not available.
- pH** : DNA Extraction Buffer Not available.
Wash Buffer (2X) 7.5
- Melting point/freezing point** : DNA Extraction Buffer Not available.
Wash Buffer (2X) 0°C (32°F)
- Boiling point, initial boiling point, and boiling range** : DNA Extraction Buffer Not available.
Wash Buffer (2X) 100°C (212°F)
- Flash point** : DNA Extraction Buffer Not available.
Wash Buffer (2X) Not available.
- Evaporation rate** : DNA Extraction Buffer Not available.
Wash Buffer (2X) Not available.
- Flammability** : DNA Extraction Buffer Not applicable.
Wash Buffer (2X) Not applicable.
- Lower and upper explosion limit/flammability limit** : DNA Extraction Buffer Not available.
Wash Buffer (2X) Not available.

Vapor pressure	Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method

Section 9. Physical and chemical properties and safety characteristics

	DNA Extraction Buffer						
	water	23.8	3.2		92.258	12.3	
	2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0	0		0.000007501	0.000001	
	Wash Buffer (2X)						
	water	23.8	3.2		92.258	12.3	
Relative vapor density	: DNA Extraction Buffer	Not available.					
	Wash Buffer (2X)	Not available.					
Relative density	: DNA Extraction Buffer	Not available.					
	Wash Buffer (2X)	Not available.					
Solubility(ies)	: Media Result						
	DNA Extraction Buffer						
	water	Soluble					
	Wash Buffer (2X)						
	water	Soluble					
Partition coefficient: n-octanol/water	: DNA Extraction Buffer	Not applicable.					
	Wash Buffer (2X)	Not applicable.					
Auto-ignition temperature	: DNA Extraction Buffer	Not available.					
	Wash Buffer (2X)	Not available.					
Decomposition temperature	: DNA Extraction Buffer	Not available.					
	Wash Buffer (2X)	Not available.					
Viscosity	: DNA Extraction Buffer	Not available.					
	Wash Buffer (2X)	Not available.					
Particle characteristics							
Median particle size	: DNA Extraction Buffer	Not applicable.					
	Wash Buffer (2X)	Not applicable.					

Section 10. Stability and reactivity

10.1 Reactivity	: DNA Extraction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Wash Buffer (2X)	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: DNA Extraction Buffer	The product is stable.
	Wash Buffer (2X)	The product is stable.
10.3 Possibility of hazardous reactions	: DNA Extraction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Wash Buffer (2X)	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: DNA Extraction Buffer	No specific data.
	Wash Buffer (2X)	No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials	: DNA Extraction Buffer	May react or be incompatible with oxidizing materials.
	Wash Buffer (2X)	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: DNA Extraction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Wash Buffer (2X)	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

Not available.

Irritation/Corrosion

Not available.

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)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : DNA Extraction Buffer
Wash Buffer (2X)

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

Potential acute health effects

Eye contact : DNA Extraction Buffer
Wash Buffer (2X)

Causes serious eye damage.
No known significant effects or critical hazards.
Harmful if inhaled. Corrosive to the respiratory system.

Inhalation : DNA Extraction Buffer
Wash Buffer (2X)

No known significant effects or critical hazards.

Skin contact : DNA Extraction Buffer
Wash Buffer (2X)

Causes severe burns.
No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion	: DNA Extraction Buffer	May cause burns to mouth, throat and stomach. Harmful if swallowed. Corrosive to the digestive tract. Causes burns.
	Wash Buffer (2X)	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: DNA Extraction Buffer	Adverse symptoms may include the following: pain watering redness
	Wash Buffer (2X)	No specific data.
Inhalation	: DNA Extraction Buffer	Adverse symptoms may include the following: respiratory tract irritation coughing
	Wash Buffer (2X)	No specific data.
Skin contact	: DNA Extraction Buffer	Adverse symptoms may include the following: pain or irritation redness blistering may occur
	Wash Buffer (2X)	No specific data.
Ingestion	: DNA Extraction Buffer	Adverse symptoms may include the following: stomach pains
	Wash Buffer (2X)	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	: DNA Extraction Buffer Wash Buffer (2X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: DNA Extraction Buffer Wash Buffer (2X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: DNA Extraction Buffer Wash Buffer (2X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: DNA Extraction Buffer Wash Buffer (2X)	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)
DNA Extraction Buffer DNA Extraction Buffer Guanidinium thiocyanate	1057.1 500	2325.6 1100	N/A N/A	N/A N/A	3.2 1.5
Wash Buffer (2X) Wash Buffer (2X)	258620.7	N/A	N/A	N/A	N/A

Section 12. Ecological information

12.1 Toxicity

 Not available.

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
DNA Extraction Buffer Guanidinium thiocyanate	-	-	Inherent

12.3 Bioaccumulative potential

Not available.

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 :  DNA Extraction Buffer

Wash Buffer (2X)

ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION - Category 1C
SERIOUS EYE DAMAGE - Category 1
HNOC - Corrosive to digestive tract
HNOC - Corrosive to respiratory tract
Not applicable.

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
DNA Extraction Buffer Guanidinium thiocyanate	≥25 - ≤50	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 HNOC - Corrosive to digestive tract HNOC - Corrosive to respiratory tract

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.

Eurasian Economic Union : **Russian Federation inventory**: 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 : Not determined.

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
DNA Extraction Buffer ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method Calculation method Calculation method Calculation method Calculation method

History

Date of issue	: 03/07/2023
Date of previous issue	: 12/24/2019
Version	: 4
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

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.