

SAFETY DATA SHEET



Prep DNA Gel Extraction Kit, Part Number 400768

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Prep DNA Gel Extraction Kit, Part Number 400768
Part No. (Kit) : 400768
Part No. : DNA Extraction Buffer 400768-13
Wash Buffer 400768-16

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

Identified uses	
Analytical reagent.	
DNA Extraction Buffer	100 ml
Wash Buffer	125 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : DNA Extraction Buffer Mixture
Wash Buffer Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

DNA Extraction Buffer

H302 ACUTE TOXICITY (oral) - Category 4
H332 ACUTE TOXICITY (inhalation) - Category 4
H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

Ingredients of unknown toxicity : DNA Extraction Buffer Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
Wash Buffer Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%

Ingredients of unknown ecotoxicity : DNA Extraction Buffer Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.6%

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.

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SECTION 2: Hazards identification

2.2 Label elements

Hazard pictograms	: DNA Extraction Buffer Wash Buffer	
Signal word	: DNA Extraction Buffer Wash Buffer	Warning No signal word.
Hazard statements	: DNA Extraction Buffer Wash Buffer	H302 + H332 - Harmful if swallowed or if inhaled. H412 - Harmful to aquatic life with long lasting effects. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: DNA Extraction Buffer Wash Buffer	P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. Not applicable.
Response	: DNA Extraction Buffer Wash Buffer	P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Not applicable.
Storage	: DNA Extraction Buffer Wash Buffer	Not applicable. Not applicable.
Disposal	: DNA Extraction Buffer Wash Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
Hazardous ingredients	: DNA Extraction Buffer Wash Buffer	- salts of thiocyanic acid Not applicable.
Supplemental label elements	: DNA Extraction Buffer Wash Buffer	Not applicable. Safety data sheet available on request.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: DNA Extraction Buffer Wash Buffer	Not applicable. Not applicable.
<u>Special packaging requirements</u>		
Tactile warning of danger	: DNA Extraction Buffer Wash Buffer	Not applicable. Not applicable.
2.3 Other hazards		
Other hazards which do not result in classification	: DNA Extraction Buffer Wash Buffer	None known. None known.

SECTION 3: Composition/information on ingredients

3.1 Substances	: DNA Extraction Buffer Wash Buffer	Mixture Mixture
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SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
DNA Extraction Buffer Guanidinium thiocyanate	EC: 209-812-1 CAS: 593-84-0 Index: 615-004-00-3	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 3, H412 EUH032	[1]
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
Wash Buffer Sodium chloride	EC: 231-598-3 CAS: 7647-14-5	≤3	Eye Irrit. 2, H319	[1]
			See Section 16 for the full text of the H statements declared above.	

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

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: DNA Extraction Buffer	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 if irritation occurs.
	Wash Buffer	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	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 adverse health effects persist or are severe. 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 Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

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SECTION 4: First aid measures

Skin contact	: DNA Extraction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Wash Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: DNA Extraction Buffer	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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	: 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 Buffer	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: DNA Extraction Buffer	No known significant effects or critical hazards.
	Wash Buffer	No known significant effects or critical hazards.
Inhalation	: DNA Extraction Buffer	Harmful if inhaled.
	Wash Buffer	No known significant effects or critical hazards.
Skin contact	: DNA Extraction Buffer	No known significant effects or critical hazards.
	Wash Buffer	No known significant effects or critical hazards.
Ingestion	: DNA Extraction Buffer	Harmful if swallowed.
	Wash Buffer	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: DNA Extraction Buffer	No specific data.
	Wash Buffer	No specific data.
Inhalation	: DNA Extraction Buffer	No specific data.
	Wash Buffer	No specific data.
Skin contact	: DNA Extraction Buffer	No specific data.
	Wash Buffer	No specific data.
Ingestion	: DNA Extraction Buffer	No specific data.
	Wash Buffer	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

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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	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: DNA Extraction Buffer	No specific treatment.
	Wash Buffer	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: DNA Extraction Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Wash Buffer	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: DNA Extraction Buffer	None known.
	Wash Buffer	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: DNA Extraction Buffer	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.
	Wash Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: DNA Extraction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds
	Wash Buffer	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special precautions for fire-fighters	: DNA Extraction Buffer	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 Buffer	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	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Wash Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: DNA Extraction Buffer	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 Buffer	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	: DNA Extraction Buffer	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 Buffer	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

: DNA Extraction Buffer	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). Water polluting material. May be harmful to the environment if released in large quantities.
Wash Buffer	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).

6.3 Methods and material for containment and cleaning up

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	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.

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 ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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
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SECTION 7: Handling and storage

Advice on general occupational hygiene	Wash Buffer	use. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8).
	: 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.
	Wash 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.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: 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. 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 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. 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	: DNA Extraction Buffer	Industrial applications, Professional applications.
	Wash Buffer	Industrial applications, Professional applications.
Industrial sector specific solutions	: DNA Extraction Buffer	Not applicable.
	Wash Buffer	Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures	: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of
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SECTION 8: Exposure controls/personal protection

exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

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: safety glasses with side-shields.

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: DNA Extraction Buffer	Liquid.
	Wash Buffer	Liquid.
Colour	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.

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SECTION 9: Physical and chemical properties

Odour	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Odour threshold	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
pH	: DNA Extraction Buffer	6.4
	Wash Buffer	7.5
Melting point/freezing point	: DNA Extraction Buffer	Not available.
	Wash Buffer	0°C
Initial boiling point and boiling range	: DNA Extraction Buffer	Not available.
	Wash Buffer	100°C
Flash point	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Evaporation rate	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Flammability (solid, gas)	: DNA Extraction Buffer	Not applicable.
	Wash Buffer	Not applicable.
Upper/lower flammability or explosive limits	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Vapour pressure	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Vapour density	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Relative density	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Solubility(ies)	: DNA Extraction Buffer	Soluble in the following materials: cold water and hot water.
	Wash Buffer	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Auto-ignition temperature	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Decomposition temperature	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Viscosity	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Explosive properties	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.
Oxidising properties	: DNA Extraction Buffer	Not available.
	Wash Buffer	Not available.

9.2 Other information

No additional information.

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	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	The product is stable.

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SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions	: DNA Extraction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Wash Buffer	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	No specific data.
10.5 Incompatible materials	: DNA Extraction Buffer	May react or be incompatible with oxidising materials.
	Wash Buffer	May react or be incompatible with oxidising 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	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
Wash Buffer Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-

Acute toxicity estimates

Route	ATE value
DNA Extraction Buffer Oral Dermal Inhalation (dusts and mists)	1063.8 mg/kg 2340.4 mg/kg 3.191 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Wash Buffer Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitiser

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
DNA Extraction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : DNA Extraction Buffer Routes of entry anticipated: Oral, Dermal, Inhalation.
Wash Buffer Not available.

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SECTION 11: Toxicological information

Potential acute health effects

Inhalation	: DNA Extraction Buffer Wash Buffer	Harmful if inhaled. No known significant effects or critical hazards.
Ingestion	: DNA Extraction Buffer Wash Buffer	Harmful if swallowed. No known significant effects or critical hazards.
Skin contact	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Eye contact	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: DNA Extraction Buffer Wash Buffer	No specific data. No specific data.
Ingestion	: DNA Extraction Buffer Wash Buffer	No specific data. No specific data.
Skin contact	: DNA Extraction Buffer Wash Buffer	No specific data. No specific data.
Eye contact	: DNA Extraction Buffer Wash Buffer	No specific data. 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

General	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: DNA Extraction Buffer Wash Buffer	No known significant effects or critical hazards. No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

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SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
Wash Buffer Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402600 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks	

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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.

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 spilled material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: Transport information

ADR/RID / IMDG / IATA : Not regulated.

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 Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (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.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : DNA Extraction Buffer Not applicable.
Wash Buffer Not applicable.

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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.
Europe : All components are listed or exempted.

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SECTION 15: Regulatory information

Japan	: Japan inventory (ENCS): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
Malaysia	: Not determined.
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	: <input checked="" type="checkbox"/> Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

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

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]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
DNA Extraction Buffer Acute Tox. 4, H302 Acute Tox. 4, H332 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method

Full text of abbreviated H statements

DNA Extraction Buffer H302 H312 H315 H319 H332 H335 H412	Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
Wash Buffer H319	Causes serious eye irritation.

Full text of classifications [CLP/GHS]

DNA Extraction Buffer Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 3, H412 EUH032 Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 Contact with acids liberates very toxic gas. SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
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SECTION 16: Other information

Wash Buffer

Eye Irrit. 2, H319

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

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Version : 2

Notice to reader

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