

SAFETY DATA SHEET



StrataPrep PCR Purification Kit, Part Number 400773

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

1.1 Product identifier

Product name : StrataPrep PCR Purification Kit, Part Number 400773
Part No. (Kit) : 400773
Part No. : DNA-Binding Solution 400773-13
Wash Buffer (5X) 400773-16

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

Identified uses	
Analytical reagent.	
DNA-Binding Solution	25 ml
Wash Buffer (5X)	50 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-Binding Solution Mixture
Wash Buffer (5X) Mixture

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

DNA-Binding Solution

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-Binding Solution 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%

Ingredients of unknown ecotoxicity : DNA-Binding Solution 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-Binding Solution Wash Buffer (5X)	
Signal word	: DNA-Binding Solution Wash Buffer (5X)	Warning No signal word.
Hazard statements	: DNA-Binding Solution Wash Buffer (5X)	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-Binding Solution Wash Buffer (5X)	P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. Not applicable.
Response	: DNA-Binding Solution Wash Buffer (5X)	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-Binding Solution Wash Buffer (5X)	Not applicable. Not applicable.
Disposal	: DNA-Binding Solution Wash Buffer (5X)	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable.
Hazardous ingredients	: DNA-Binding Solution	- salts of thiocyanic acid
Supplemental label elements	: DNA-Binding Solution Wash Buffer (5X)	Not applicable. Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: DNA-Binding Solution Wash Buffer (5X)	Not applicable. Not applicable.
<u>Special packaging requirements</u>		
Tactile warning of danger	: DNA-Binding Solution Wash Buffer (5X)	Not applicable. Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: DNA-Binding Solution Wash Buffer (5X)	None known. None known.
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SECTION 3: Composition/information on ingredients

3.1 Substances : DNA-Binding Solution Mixture
Wash Buffer (5X) Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type

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SECTION 3: Composition/information on ingredients

DNA-Binding Solution				
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]
Trometamol	EC: 201-064-4 CAS: 77-86-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[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-Binding 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 if irritation occurs.
	Wash Buffer (5X)	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-Binding Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if 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 (5X)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

SECTION 4: First aid measures

Skin contact	: DNA-Binding Solution	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 (5X)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: DNA-Binding Solution	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 (5X)	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-Binding Solution	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 (5X)	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-Binding Solution	No known significant effects or critical hazards.
	Wash Buffer (5X)	No known significant effects or critical hazards.
Inhalation	: DNA-Binding Solution	Harmful if inhaled.
	Wash Buffer (5X)	No known significant effects or critical hazards.
Skin contact	: DNA-Binding Solution	No known significant effects or critical hazards.
	Wash Buffer (5X)	No known significant effects or critical hazards.
Ingestion	: DNA-Binding Solution	Harmful if swallowed.
	Wash Buffer (5X)	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: DNA-Binding Solution	No specific data.
	Wash Buffer (5X)	No specific data.
Inhalation	: DNA-Binding Solution	No specific data.
	Wash Buffer (5X)	No specific data.
Skin contact	: DNA-Binding Solution	No specific data.
	Wash Buffer (5X)	No specific data.
Ingestion	: DNA-Binding Solution	No specific data.
	Wash Buffer (5X)	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-Binding Solution Wash Buffer (5X)	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: DNA-Binding Solution Wash Buffer (5X)	No specific treatment. No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: DNA-Binding Solution Wash Buffer (5X)	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: DNA-Binding Solution Wash Buffer (5X)	None known. None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: DNA-Binding Solution Wash Buffer (5X)	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 combustion products	: DNA-Binding Solution Wash Buffer (5X)	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters	: DNA-Binding Solution Wash Buffer (5X)	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-Binding Solution Wash Buffer (5X)	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. 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-Binding 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 Buffer (5X)	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-Binding 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 Buffer (5X)	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-Binding 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). Water polluting material. May be harmful to the environment if released in large quantities.
Wash Buffer (5X)	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-Binding 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 Buffer (5X)	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-Binding 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. 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

	Wash Buffer (5X)	use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	: DNA-Binding Solution	Put on appropriate personal protective equipment (see Section 8). 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 (5X)	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-Binding 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 Buffer (5X)	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-Binding Solution Wash Buffer (5X)	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: DNA-Binding Solution Wash Buffer (5X)	Not applicable. 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.

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-Binding Solution	Liquid.
	Wash Buffer (5X)	Liquid.
Colour	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Odour	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Odour threshold	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.

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SECTION 9: Physical and chemical properties

pH	: DNA-Binding Solution	6.4
	Wash Buffer (5X)	6.4
Melting point/freezing point	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	0°C
Initial boiling point and boiling range	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	100°C
Flash point	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Evaporation rate	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Flammability (solid, gas)	: DNA-Binding Solution	Not applicable.
	Wash Buffer (5X)	Not applicable.
Upper/lower flammability or explosive limits	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Vapour pressure	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Vapour density	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Relative density	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Solubility(ies)	: DNA-Binding Solution	Soluble in the following materials: cold water and hot water.
	Wash Buffer (5X)	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Auto-ignition temperature	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Decomposition temperature	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Viscosity	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Explosive properties	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.
Oxidising properties	: DNA-Binding Solution	Not available.
	Wash Buffer (5X)	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: DNA-Binding Solution	No specific test data related to reactivity available for this product or its ingredients.
	Wash Buffer (5X)	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: DNA-Binding Solution	The product is stable.
	Wash Buffer (5X)	The product is stable.
10.3 Possibility of hazardous reactions	: DNA-Binding Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Wash Buffer (5X)	Under normal conditions of storage and use, hazardous reactions will not occur.

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SECTION 10: Stability and reactivity

10.4 Conditions to avoid	: DNA-Binding Solution Wash Buffer (5X)	No specific data. No specific data.
10.5 Incompatible materials	: DNA-Binding Solution Wash Buffer (5X)	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	: DNA-Binding Solution Wash Buffer (5X)	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
DNA-Binding Solution Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

Acute toxicity estimates

Route	ATE value
DNA-Binding Solution Oral	1063.8 mg/kg
Dermal	2340.4 mg/kg
Inhalation (dusts and mists)	3.191 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
DNA-Binding Solution Trometamol	Skin - Moderate irritant	Rabbit	-	25 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-

Sensitiser

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
DNA-Binding Solution 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
Trometamol	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-Binding Solution
Wash Buffer (5X) Routes of entry anticipated: Oral, Dermal, Inhalation.
Not available.

Potential acute health effects

Inhalation : DNA-Binding Solution
Wash Buffer (5X) Harmful if inhaled.
No known significant effects or critical hazards.

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SECTION 11: Toxicological information

Ingestion	: DNA-Binding Solution Wash Buffer (5X)	Harmful if swallowed. No known significant effects or critical hazards.
Skin contact	: DNA-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Eye contact	: DNA-Binding Solution Wash Buffer (5X)	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-Binding Solution Wash Buffer (5X)	No specific data. No specific data.
Ingestion	: DNA-Binding Solution Wash Buffer (5X)	No specific data. No specific data.
Skin contact	: DNA-Binding Solution Wash Buffer (5X)	No specific data. No specific data.
Eye contact	: DNA-Binding Solution Wash Buffer (5X)	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-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: DNA-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: DNA-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: DNA-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: DNA-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: DNA-Binding Solution Wash Buffer (5X)	No known significant effects or critical hazards. No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
DNA-Binding Solution Trometamol	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

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SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
DNA-Binding Solution Trometamol	-1.56	-	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

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 : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

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. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

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-Binding Solution Not applicable.
Wash Buffer (5X) 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.
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	: Not determined.
Turkey	: Not determined.
United States	: All components are listed or exempted.

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SECTION 15: Regulatory information

Viet Nam : 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-Binding Solution 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-Binding Solution 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.
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Full text of classifications [CLP/GHS]

DNA-Binding Solution 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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Notice to reader

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