SAFETY DATA SHEET

Agilent Technologies

Organic Acids Solutions Kit

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

1.1 Product identifier

Product name : Organic Acids Solutions Kit

Part no. (chemical kit) : 5063-6510, 5063-6510-P

Part no. :

Ultra Pure Water for CE	5062-8578
Sodium Hydroxide Solution 0.1N for HPCE	5062-8575
Sodium Hydroxide Solution 1.0N for HPCE	5062-8576
Organic Acids Buffer Solution pH 5.6	8500-6785
Organic Acids Test Sample	8500-6900

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use

Ultra Pure Water for CE	500 ml
Sodium Hydroxide Solution 0.1N for HPCE	250 ml
Sodium Hydroxide Solution 1.0N for HPCE	250 ml
Organic Acids Buffer Solution pH 5.6	250 ml
Organic Acids Test Sample	20 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 :

Ultra Pure Water for CE	Mono-constituent substance
Sodium Hydroxide Solution 0.1N for HPCE	Mixture
Sodium Hydroxide Solution 1.0N for HPCE	Mixture
Organic Acids Buffer Solution pH 5.6	Mixture
Organic Acids Test Sample	Mixture

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

SECTION 2: Hazards identification

Sodium Hydroxide Solution 0.1N for HPCE

H290	CORROSIVE TO METALS - Category 1

Sodium Hydroxide Solution 1.0N for HPCE

H290	CORROSIVE TO METALS - Category 1
H314	SKIN CORROSION/IRRITATION - Category 1B

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

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

2.2 Label elements

Hazard pictograms :

Sodium Hydroxide Solution 0.1N for HPCE

Sodium Hydroxide Solution 1.0N for HPCE

Signal word :

Ultra Pure Water for CE	No signal word.
Sodium Hydroxide Solution 0.1N for HPCE	Warning
Sodium Hydroxide Solution 1.0N for HPCE	Danger
Organic Acids Buffer Solution pH 5.6	No signal word.
Organic Acids Test Sample	No signal word.

Hazard statements :

Ultra Pure Water for CE	No known significant effects or critical hazards.
Sodium Hydroxide Solution 0.1N for HPCE	H290 - May be corrosive to metals.
Sodium Hydroxide Solution 1.0N for HPCE	H290 - May be corrosive to metals. H314 - Causes severe skin burns and eye damage.
Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
Organic Acids Test Sample	No known significant effects or critical hazards.

Precautionary statements

Prevention :

Ultra Pure Water for CE	Not applicable.
Sodium Hydroxide Solution 0.1N for HPCE	P234 - Keep only in original packaging.
Sodium Hydroxide Solution 1.0N for HPCE	P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection. P234 - Keep only in original packaging.
Organic Acids Buffer Solution pH 5.6	Not applicable.
Organic Acids Test Sample	Not applicable.

SECTION 2: Hazards identification

Response	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	P390 - Absorb spillage to prevent material damage.
		Sodium Hydroxide Solution 1.0N for HPCE	P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. 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 physician. P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.
		Organic Acids Buffer Solution pH 5.6	Not applicable.
		Organic Acids Test Sample	Not applicable.
Storage	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	P406 - Store in corrosive resistant container with a resistant inner liner.
		Sodium Hydroxide Solution 1.0N for HPCE	P405 - Store locked up.
		Organic Acids Buffer Solution pH 5.6	Not applicable.
		Organic Acids Test Sample	Not applicable.
Disposal	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
		Sodium Hydroxide Solution 1.0N for HPCE	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Organic Acids Buffer Solution pH 5.6	Not applicable.
		Organic Acids Test Sample	Not applicable.
Hazardous ingredients	:	Sodium Hydroxide Solution 1.0N for HPCE	- sodium hydroxide
Supplemental label elements	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
		Sodium Hydroxide Solution 1.0N for HPCE	Not applicable.
		Organic Acids Buffer Solution pH 5.6	Not applicable.
		Organic Acids Test Sample	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
		Sodium Hydroxide Solution 1.0N for HPCE	Not applicable.
		Organic Acids Buffer Solution pH 5.6	Not applicable.
		Organic Acids Test Sample	Not applicable.

Special packaging requirements

SECTION 2: Hazards identification

Tactile warning of danger :	Ultra Pure Water for CE	Not applicable.
	Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
	Sodium Hydroxide Solution 1.0N for HPCE	Not applicable.
	Organic Acids Buffer Solution pH 5.6	Not applicable.
	Organic Acids Test Sample	Not applicable.

2.3 Other hazards

Other hazards which do not result in classification :	Ultra Pure Water for CE	None known.
	Sodium Hydroxide Solution 0.1N for HPCE	None known.
	Sodium Hydroxide Solution 1.0N for HPCE	None known.
	Organic Acids Buffer Solution pH 5.6	None known.
	Organic Acids Test Sample	None known.

SECTION 3: Composition/information on ingredients

3.1 Substances :	Ultra Pure Water for CE	Mono-constituent substance
	Sodium Hydroxide Solution 0.1N for HPCE	Mixture
	Sodium Hydroxide Solution 1.0N for HPCE	Mixture
	Organic Acids Buffer Solution pH 5.6	Mixture
	Organic Acids Test Sample	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Ultra Pure Water for CE				
Water	REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[A]
Sodium Hydroxide Solution 1.0N for HPCE				
Sodium hydroxide	EC: 215-185-5 CAS: 1310-73-2 Index: 011-002-00-6	≤5	Skin Corr. 1A, H314 **See Section 16 for the full text of the H statements declared above.**	[1] [2]

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
[A] Constituent
[B] Impurity
[C] Stabilising additive

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	:	Ultra Pure Water for CE	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.
		Sodium Hydroxide Solution 0.1N for HPCE	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.
		Sodium Hydroxide Solution 1.0N for HPCE	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.
		Organic Acids Buffer Solution pH 5.6	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.
		Organic Acids Test Sample	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	:	Ultra Pure Water for CE	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Sodium Hydroxide Solution 0.1N for HPCE	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		Sodium Hydroxide Solution 1.0N for HPCE	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.
		Organic Acids Buffer Solution pH 5.6	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Organic Acids Test Sample	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	Ultra Pure Water for CE	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Sodium Hydroxide Solution 0.1N for HPCE	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.
		Sodium Hydroxide Solution 1.0N for HPCE	Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash

SECTION 4: First aid measures

			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.
		Organic Acids Buffer Solution pH 5.6	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Organic Acids Test Sample	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	Ultra Pure Water for CE	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.
		Sodium Hydroxide Solution 0.1N for HPCE	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 adverse health effects persist or are severe. 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.
		Sodium Hydroxide Solution 1.0N for HPCE	Get medical attention immediately. Call a poison center or physician. 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. 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.
		Organic Acids Buffer Solution pH 5.6	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.
		Organic Acids Test Sample	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.

SECTION 4: First aid measures

Protection of first-aiders	:	Ultra Pure Water for CE	No action shall be taken involving any personal risk or without suitable training.
		Sodium Hydroxide Solution 0.1N for HPCE	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		Sodium Hydroxide Solution 1.0N for HPCE	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.
		Organic Acids Buffer Solution pH 5.6	No action shall be taken involving any personal risk or without suitable training.
		Organic Acids Test Sample	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	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 1.0N for HPCE	Causes serious eye damage.
		Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
		Organic Acids Test Sample	No known significant effects or critical hazards.
Inhalation	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
		Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
		Organic Acids Test Sample	No known significant effects or critical hazards.
Skin contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 1.0N for HPCE	Causes severe burns.
		Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
		Organic Acids Test Sample	No known significant effects or critical hazards.
Ingestion	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
		Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
		Organic Acids Test Sample	No known significant effects or critical hazards.

Over-exposure signs/symptoms

SECTION 4: First aid measures

Eye contact	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	Adverse symptoms may include the following: pain watering redness
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
Inhalation	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	No specific data.
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
Skin contact	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	Adverse symptoms may include the following: pain or irritation redness blistering may occur
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
Ingestion	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	Adverse symptoms may include the following: stomach pains
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	Ultra Pure Water for CE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Sodium Hydroxide Solution 0.1N for HPCE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Sodium Hydroxide Solution 1.0N for HPCE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Organic Acids Buffer Solution pH 5.6	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Organic Acids Test Sample	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 4: First aid measures

Specific treatments :

Ultra Pure Water for CE	No specific treatment.
Sodium Hydroxide Solution 0.1N for HPCE	No specific treatment.
Sodium Hydroxide Solution 1.0N for HPCE	No specific treatment.
Organic Acids Buffer Solution pH 5.6	No specific treatment.
Organic Acids Test Sample	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media :

Ultra Pure Water for CE	Use an extinguishing agent suitable for the surrounding fire.
Sodium Hydroxide Solution 0.1N for HPCE	Use an extinguishing agent suitable for the surrounding fire.
Sodium Hydroxide Solution 1.0N for HPCE	Use an extinguishing agent suitable for the surrounding fire.
Organic Acids Buffer Solution pH 5.6	Use an extinguishing agent suitable for the surrounding fire.
Organic Acids Test Sample	Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media :

Ultra Pure Water for CE	None known.
Sodium Hydroxide Solution 0.1N for HPCE	None known.
Sodium Hydroxide Solution 1.0N for HPCE	None known.
Organic Acids Buffer Solution pH 5.6	None known.
Organic Acids Test Sample	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :

Ultra Pure Water for CE	In a fire or if heated, a pressure increase will occur and the container may burst.
Sodium Hydroxide Solution 0.1N for HPCE	In a fire or if heated, a pressure increase will occur and the container may burst.
Sodium Hydroxide Solution 1.0N for HPCE	In a fire or if heated, a pressure increase will occur and the container may burst.
Organic Acids Buffer Solution pH 5.6	In a fire or if heated, a pressure increase will occur and the container may burst.
Organic Acids Test Sample	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products :

Ultra Pure Water for CE	No specific data.
Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
Sodium Hydroxide Solution 1.0N for HPCE	Decomposition products may include the following materials: metal oxide/oxides
Organic Acids Buffer Solution pH 5.6	No specific data.
Organic Acids Test Sample	No specific data.

5.3 Advice for firefighters

SECTION 5: Firefighting measures

Special precautions for fire-fighters	: Ultra Pure Water for CE	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.
	Sodium Hydroxide Solution 0.1N for HPCE	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.
	Sodium Hydroxide Solution 1.0N for HPCE	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.
	Organic Acids Buffer Solution pH 5.6	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.
	Organic Acids Test Sample	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	: Ultra Pure Water for CE	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.
	Sodium Hydroxide Solution 0.1N for HPCE	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.
	Sodium Hydroxide Solution 1.0N for HPCE	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.
	Organic Acids Buffer Solution pH 5.6	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.
	Organic Acids Test Sample	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	: Ultra Pure Water for CE	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.
	Sodium Hydroxide Solution 0.1N for HPCE	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.
	Sodium Hydroxide	No action shall be taken involving any personal risk or

SECTION 6: Accidental release measures

	Solution 1.0N for HPCE	without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Organic Acids Buffer Solution pH 5.6	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.
	Organic Acids Test Sample	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 :	Ultra Pure Water for CE	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".
	Sodium Hydroxide Solution 0.1N for HPCE	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".
	Sodium Hydroxide Solution 1.0N for HPCE	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".
	Organic Acids Buffer Solution pH 5.6	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".
	Organic Acids Test Sample	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 :	Ultra Pure Water for CE	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).
	Sodium Hydroxide Solution 0.1N for HPCE	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).
	Sodium Hydroxide Solution 1.0N for HPCE	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).
	Organic Acids Buffer Solution pH 5.6	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).
	Organic Acids Test Sample	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

SECTION 6: Accidental release measures

Methods for cleaning up :

Ultra Pure Water for CE	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.
Sodium Hydroxide Solution 0.1N for HPCE	Stop leak if without risk. Move containers from spill area. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
Sodium Hydroxide Solution 1.0N for HPCE	Stop leak if without risk. Move containers from spill area. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
Organic Acids Buffer Solution pH 5.6	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.
Organic Acids Test Sample	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 :

Ultra Pure Water for CE	Put on appropriate personal protective equipment (see Section 8).
Sodium Hydroxide Solution 0.1N for HPCE	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
Sodium Hydroxide Solution 1.0N for HPCE	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
Organic Acids Buffer Solution pH 5.6	Put on appropriate personal protective equipment (see Section 8).
Organic Acids Test Sample	Put on appropriate personal protective equipment (see Section 8).

SECTION 7: Handling and storage

Advice on general occupational hygiene	:	Ultra Pure Water for CE	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.
		Sodium Hydroxide Solution 0.1N for HPCE	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.
		Sodium Hydroxide Solution 1.0N for HPCE	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.
		Organic Acids Buffer Solution pH 5.6	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.
		Organic Acids Test Sample	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	:	Ultra Pure Water for CE	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.
		Sodium Hydroxide Solution 0.1N for HPCE	Store between the following temperatures: 15 to 25°C (59 to 77°F). 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 in corrosive resistant container with a resistant inner liner. Separate from acids. Keep away from metals. 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.
		Sodium Hydroxide Solution 1.0N for HPCE	Store between the following temperatures: 15 to 25°C (59 to 77°F). 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 in corrosive resistant container with a resistant inner liner. Store locked

SECTION 7: Handling and storage

	up. Separate from acids. Keep away from metals. 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.
Organic Acids Buffer Solution pH 5.6	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.
Organic Acids Test Sample	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	: Ultra Pure Water for CE	Industrial applications, Professional applications.
	Sodium Hydroxide Solution 0.1N for HPCE	Industrial applications, Professional applications.
	Sodium Hydroxide Solution 1.0N for HPCE	Industrial applications, Professional applications.
	Organic Acids Buffer Solution pH 5.6	Industrial applications, Professional applications.
	Organic Acids Test Sample	Industrial applications, Professional applications.
Industrial sector specific solutions	: Ultra Pure Water for CE	Not applicable.
	Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
	Sodium Hydroxide Solution 1.0N for HPCE	Not applicable.
	Organic Acids Buffer Solution pH 5.6	Not applicable.
	Organic Acids Test Sample	Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide	**EH40/2005 WELs (United Kingdom (UK), 12/2011).** STEL: 2 mg/m³ 15 minutes.

SECTION 8: Exposure controls/personal protection

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 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: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	Ultra Pure Water for CE	Liquid.
		Sodium Hydroxide Solution 0.1N for HPCE	Liquid. [Clear.]
		Sodium Hydroxide Solution 1.0N for HPCE	Liquid. [Clear.]
		Organic Acids Buffer Solution pH 5.6	Liquid.
		Organic Acids Test Sample	Liquid.
Colour	:	Ultra Pure Water for CE	Clear. / Colourless.
		Sodium Hydroxide Solution 0.1N for HPCE	Colourless.
		Sodium Hydroxide Solution 1.0N for HPCE	Colourless.
		Organic Acids Buffer Solution pH 5.6	Colourless.
		Organic Acids Test Sample	Not available.
Odour	:	Ultra Pure Water for CE	Odourless.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Odourless.
		Organic Acids Test Sample	Not available.
Odour threshold	:	Ultra Pure Water for CE	Not available.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
pH	:	Ultra Pure Water for CE	7
		Sodium Hydroxide Solution 0.1N for HPCE	13
		Sodium Hydroxide Solution 1.0N for HPCE	>11.5
		Organic Acids Buffer Solution pH 5.6	5.6
		Organic Acids Test Sample	Not available.
Melting point/freezing point	:	Ultra Pure Water for CE	0°C
		Sodium Hydroxide Solution 0.1N for HPCE	0°C
		Sodium Hydroxide Solution 1.0N for HPCE	0°C
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	0°C

SECTION 9: Physical and chemical properties

Initial boiling point and boiling range	:	Ultra Pure Water for CE	100°C
		Sodium Hydroxide Solution 0.1N for HPCE	100°C
		Sodium Hydroxide Solution 1.0N for HPCE	100°C
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	100°C
Flash point	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Evaporation rate	:	Ultra Pure Water for CE	Not available.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Flammability (solid, gas)	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
		Sodium Hydroxide Solution 1.0N for HPCE	Not applicable.
		Organic Acids Buffer Solution pH 5.6	Not applicable.
		Organic Acids Test Sample	Not applicable.
Upper/lower flammability or explosive limits	:	Ultra Pure Water for CE	Not available.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Vapour pressure	:	Ultra Pure Water for CE	3.2 kPa [room temperature]
		Sodium Hydroxide Solution 0.1N for HPCE	<2.4 kPa [room temperature]
		Sodium Hydroxide Solution 1.0N for HPCE	<2.4 kPa [room temperature]
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.

SECTION 9: Physical and chemical properties

Vapour density	:	Ultra Pure Water for CE	0.62 [Air = 1]
		Sodium Hydroxide Solution 0.1N for HPCE	<1 [Air = 1]
		Sodium Hydroxide Solution 1.0N for HPCE	<1 [Air = 1]
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Relative density	:	Ultra Pure Water for CE	1
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	0.999
		Organic Acids Test Sample	Not available.
Solubility(ies)	:	Ultra Pure Water for CE	Easily soluble in the following materials: cold water and hot water.
		Sodium Hydroxide Solution 0.1N for HPCE	Easily soluble in the following materials: cold water and hot water.
		Sodium Hydroxide Solution 1.0N for HPCE	Easily soluble in the following materials: cold water and hot water.
		Organic Acids Buffer Solution pH 5.6	Easily soluble in the following materials: cold water and hot water.
		Organic Acids Test Sample	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	Ultra Pure Water for CE	-1.38
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Auto-ignition temperature	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Decomposition temperature	:	Ultra Pure Water for CE	Not available.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.

SECTION 9: Physical and chemical properties

Viscosity	:	Ultra Pure Water for CE	Not available.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Explosive properties	:	Ultra Pure Water for CE	Not available.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.
Oxidising properties	:	Ultra Pure Water for CE	Not applicable.
		Sodium Hydroxide Solution 0.1N for HPCE	Not available.
		Sodium Hydroxide Solution 1.0N for HPCE	Not available.
		Organic Acids Buffer Solution pH 5.6	Not available.
		Organic Acids Test Sample	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	Ultra Pure Water for CE	No specific test data related to reactivity available for this product or its ingredients.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific test data related to reactivity available for this product or its ingredients.
		Sodium Hydroxide Solution 1.0N for HPCE	No specific test data related to reactivity available for this product or its ingredients.
		Organic Acids Buffer Solution pH 5.6	No specific test data related to reactivity available for this product or its ingredients.
		Organic Acids Test Sample	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	Ultra Pure Water for CE	The product is stable.
		Sodium Hydroxide Solution 0.1N for HPCE	The product is stable.
		Sodium Hydroxide Solution 1.0N for HPCE	The product is stable.
		Organic Acids Buffer Solution pH 5.6	The product is stable.
		Organic Acids Test Sample	The product is stable.

SECTION 10: Stability and reactivity

10.3 Possibility of hazardous reactions	:	Ultra Pure Water for CE	Under normal conditions of storage and use, hazardous reactions will not occur.
		Sodium Hydroxide Solution 0.1N for HPCE	Under normal conditions of storage and use, hazardous reactions will not occur.
		Sodium Hydroxide Solution 1.0N for HPCE	Under normal conditions of storage and use, hazardous reactions will not occur.
		Organic Acids Buffer Solution pH 5.6	Under normal conditions of storage and use, hazardous reactions will not occur.
		Organic Acids Test Sample	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	No specific data.
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
10.5 Incompatible materials	:	Ultra Pure Water for CE	May react or be incompatible with oxidising materials.
		Sodium Hydroxide Solution 0.1N for HPCE	Reactive or incompatible with the following materials: acids metals metals
		Sodium Hydroxide Solution 1.0N for HPCE	Reactive or incompatible with the following materials: acids metals metals
		Organic Acids Buffer Solution pH 5.6	May react or be incompatible with oxidising materials.
		Organic Acids Test Sample	May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	:	Ultra Pure Water for CE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Sodium Hydroxide Solution 0.1N for HPCE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Sodium Hydroxide Solution 1.0N for HPCE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Organic Acids Buffer Solution pH 5.6	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Organic Acids Test Sample	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
Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide	LD50 Dermal	Rabbit	1350 mg/kg	-

Acute toxicity estimates

Not available.

SECTION 11: Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Sodium Hydroxide Solution 1.0N for HPCE					
Sodium hydroxide	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure :

Ultra Pure Water for CE	Not available.
Sodium Hydroxide Solution 0.1N for HPCE	Routes of entry anticipated: Oral, Dermal, Inhalation.
Sodium Hydroxide Solution 1.0N for HPCE	Routes of entry anticipated: Oral, Dermal, Inhalation.
Organic Acids Buffer Solution pH 5.6	Not available.
Organic Acids Test Sample	Not available.

Potential acute health effects

Inhalation :

Ultra Pure Water for CE	No known significant effects or critical hazards.
Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
Organic Acids Test Sample	No known significant effects or critical hazards.

Ingestion :

Ultra Pure Water for CE	No known significant effects or critical hazards.
Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.

SECTION 11: Toxicological information

		Organic Acids Test Sample	No known significant effects or critical hazards.
Skin contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 1.0N for HPCE	Causes severe burns.
		Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
		Organic Acids Test Sample	No known significant effects or critical hazards.
Eye contact	:	Ultra Pure Water for CE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
		Sodium Hydroxide Solution 1.0N for HPCE	Causes serious eye damage.
		Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
		Organic Acids Test Sample	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	No specific data.
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
Ingestion	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	Adverse symptoms may include the following: stomach pains
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
Skin contact	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	Adverse symptoms may include the following: pain or irritation redness blistering may occur
		Organic Acids Buffer Solution pH 5.6	No specific data.
		Organic Acids Test Sample	No specific data.
Eye contact	:	Ultra Pure Water for CE	No specific data.
		Sodium Hydroxide Solution 0.1N for HPCE	No specific data.
		Sodium Hydroxide Solution 1.0N for HPCE	Adverse symptoms may include the following: pain watering redness

SECTION 11: Toxicological information

Organic Acids Buffer Solution pH 5.6	No specific data.
Organic Acids Test Sample	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	: Ultra Pure Water for CE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
	Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
	Organic Acids Test Sample	No known significant effects or critical hazards.
Carcinogenicity	: Ultra Pure Water for CE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
	Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
	Organic Acids Test Sample	No known significant effects or critical hazards.
Mutagenicity	: Ultra Pure Water for CE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
	Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
	Organic Acids Test Sample	No known significant effects or critical hazards.
Teratogenicity	: Ultra Pure Water for CE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
	Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
	Organic Acids Test Sample	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Developmental effects :	Ultra Pure Water for CE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
	Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
	Organic Acids Test Sample	No known significant effects or critical hazards.
Fertility effects :	Ultra Pure Water for CE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 0.1N for HPCE	No known significant effects or critical hazards.
	Sodium Hydroxide Solution 1.0N for HPCE	No known significant effects or critical hazards.
	Organic Acids Buffer Solution pH 5.6	No known significant effects or critical hazards.
	Organic Acids Test Sample	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ultra Pure Water for CE Water	-	-	Readily
Sodium Hydroxide Solution 1.0N for HPCE Sodium hydroxide	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Ultra Pure Water for CE Water	-1.38	-	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 : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.

Additional information

ADR/RID : **Hazard identification number** 90
Limited quantity See SP 251
Special provisions 251, 340
Tunnel code (E)

IMDG : **Emergency schedules** F-A, _S-P_
Special provisions 251, 340

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163

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.

SECTION 14: Transport information

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 :

Ultra Pure Water for CE	Not applicable.
Sodium Hydroxide Solution 0.1N for HPCE	Not applicable.
Sodium Hydroxide Solution 1.0N for HPCE	Not applicable.
Organic Acids Buffer Solution pH 5.6	Not applicable.
Organic Acids Test Sample	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.

SECTION 15: Regulatory information

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are listed or exempted.

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
Sodium Hydroxide Solution 0.1N for HPCE	
Met. Corr. 1, H290	Expert judgment
Sodium Hydroxide Solution 1.0N for HPCE	
Met. Corr. 1, H290	Expert judgment
Skin Corr. 1B, H314	Expert judgment

Full text of abbreviated H statements

Sodium Hydroxide Solution 0.1N for HPCE	
H290	May be corrosive to metals.
Sodium Hydroxide Solution 1.0N for HPCE	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Full text of classifications [CLP/GHS]

Sodium Hydroxide Solution 0.1N for HPCE	
Met. Corr. 1, H290	CORROSIVE TO METALS - Category 1
Sodium Hydroxide Solution 1.0N for HPCE	
Met. Corr. 1, H290	CORROSIVE TO METALS - Category 1
Skin Corr. 1A, H314	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B

Date of issue/ Date of revision : 13/03/2018

Date of previous issue : 01/04/2016

Version : 2

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.