

SAFETY DATA SHEET

Cation Solutions Kit for CE, Part Number 5064-8206

Section 1. Identification

1.1 Product identifier

Product name : Cation Solutions Kit for CE, Part Number 5064-8206
Part No. (Chemical Kit) : 5064-8206
Part No. : Ultra Pure Water for CE 5062-8578
Cation Buffer for CE - pH 3.2 5064-8203
Cation Test Sample for CE 5064-8205
Validation date : 8/3/2017

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

Material uses : Analytical chemistry.
 Ultra Pure Water for CE 500 ml
Cation Buffer for CE - pH 3.2 250 ml
Cation Test Sample for CE 25 ml

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : Ultra Pure Water for CE While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Cation Buffer for CE - pH 3.2 While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Cation Test Sample for CE While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

Not classified.

2.2 GHS label elements

Signal word :

Section 2. Hazards identification

	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	No signal word. No signal word. No signal word.
Hazard statements	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Precautionary statements		
Prevention	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	Not applicable. Not applicable. Not applicable.
Response	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	Not applicable. Not applicable. Not applicable.
Storage	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	Not applicable. Not applicable. Not applicable.
Disposal	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	Not applicable. Not applicable. Not applicable.
Supplemental label elements	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	None known. None known. None known.

2.3 Other hazards

Hazards not otherwise classified	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	None known. None known. None known.
---	---	---

Section 3. Composition/information on ingredients

Substance/mixture	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample for CE	Substance Mixture Mixture
--------------------------	---	---------------------------------

Ingredient name	%	CAS number
<input checked="" type="checkbox"/> Ultra Pure Water for CE Water	100	7732-18-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	<input checked="" type="checkbox"/> Ultra Pure Water for CE <input checked="" type="checkbox"/> Cation Buffer for CE - pH 3.2 <input checked="" type="checkbox"/> Cation Test Sample 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. 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. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
--------------------	---	--

Section 4. First aid measures

Inhalation	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	Check for and remove any contact lenses. Get medical attention if irritation occurs. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample 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. 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. 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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.
Inhalation	: Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.
Skin contact	: Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.
Ingestion	: Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.

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

Notes to physician	: Ultra Pure Water for CE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Cation Buffer for CE - pH 3.2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Cation Test Sample for CE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Ultra Pure Water for CE	No specific treatment.
	Cation Buffer for CE - pH 3.2	No specific treatment.
	Cation Test Sample for CE	No specific treatment.
Protection of first-aiders	: Ultra Pure Water for CE	No action shall be taken involving any personal risk or without suitable training.
	Cation Buffer for CE - pH 3.2	No action shall be taken involving any personal risk or without suitable training.
	Cation Test Sample for CE	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Ultra Pure Water for CE	Use an extinguishing agent suitable for the surrounding fire.
	Cation Buffer for CE - pH 3.2	Use an extinguishing agent suitable for the surrounding fire.
	Cation Test Sample for CE	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Ultra Pure Water for CE	None known.
	Cation Buffer for CE - pH 3.2	None known.
	Cation Test Sample for CE	None known.

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

Specific hazards arising from the chemical	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cation Buffer for CE - pH 3.2	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cation Test Sample for CE	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.
5.3 Advice for firefighters		
Special protective actions for fire-fighters	: <input checked="" type="checkbox"/> 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.
	Cation Buffer for CE - pH 3.2	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.
	Cation Test Sample 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.
Special protective equipment for fire-fighters	: <input checked="" type="checkbox"/> 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.
	Cation Buffer for CE - pH 3.2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Cation Test Sample 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.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: <input checked="" type="checkbox"/> 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 spilled material. Put on appropriate personal protective equipment.
	Cation Buffer for CE - pH 3.2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	Cation Test Sample 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 spilled material. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Cation Buffer for CE - pH 3.2	
	Cation Test Sample for CE	
6.2 Environmental precautions	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Cation Buffer for CE - pH 3.2	
	Cation Test Sample for CE	

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	: <input checked="" type="checkbox"/> 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. 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. 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.
	Cation Buffer for CE - pH 3.2	
	Cation Test Sample for CE	

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	Put on appropriate personal protective equipment (see Section 8).
	Cation Buffer for CE - pH 3.2	Put on appropriate personal protective equipment (see Section 8).
	Cation Test Sample for CE	Put on appropriate personal protective equipment (see Section 8).

Section 7. Handling and storage

<p>Advice on general occupational hygiene</p>	<p>:  Ultra Pure Water for CE</p>	<p>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.</p>
	<p>Cation Buffer for CE - pH 3.2</p>	<p>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.</p>
	<p>Cation Test Sample for CE</p>	<p>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.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	<p>:  Ultra Pure Water for CE</p>	<p>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>Cation Buffer for CE - pH 3.2</p>	<p>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
	<p>Cation Test Sample for CE</p>	<p>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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>

7.3 Specific end use(s)

Section 7. Handling and storage

Recommendations	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	Not applicable. Not applicable. Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<input checked="" type="checkbox"/> Ultra Pure Water for CE Water	None.

8.2 Exposure controls

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

Individual protection measures

Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: 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	: <input checked="" type="checkbox"/> Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Ultra Pure Water for CE	Liquid.
	: Cation Buffer for CE - pH 3.2	Liquid.
	: Cation Test Sample for CE	Liquid. [Clear.]
Color	: Ultra Pure Water for CE	Clear. Colorless.
	: Cation Buffer for CE - pH 3.2	Blue. [Light]
	: Cation Test Sample for CE	Colorless.
Odor	: Ultra Pure Water for CE	Odorless.
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	Not available.
Odor threshold	: Ultra Pure Water for CE	Not available.
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	Not available.
pH	: Ultra Pure Water for CE	7
	: Cation Buffer for CE - pH 3.2	3.2
	: Cation Test Sample for CE	2.8
Melting point	: Ultra Pure Water for CE	0°C (32°F)
	: Cation Buffer for CE - pH 3.2	0°C (32°F)
	: Cation Test Sample for CE	0°C (32°F)
Boiling point	: Ultra Pure Water for CE	100°C (212°F)
	: Cation Buffer for CE - pH 3.2	100°C (212°F)
	: Cation Test Sample for CE	100°C (212°F)
Flash point	: Ultra Pure Water for CE	Not applicable.
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	Not available.
Evaporation rate	: Ultra Pure Water for CE	Not available.
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	<1 (butyl acetate = 1)
Flammability (solid, gas)	: Ultra Pure Water for CE	Not applicable.
	: Cation Buffer for CE - pH 3.2	Not applicable.
	: Cation Test Sample for CE	Not applicable.
Lower and upper explosive (flammable) limits	: Ultra Pure Water for CE	Not available.
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	Not available.
Vapor pressure	: Ultra Pure Water for CE	3.2 kPa (23.8 mm Hg) [room temperature]
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	Not available.
Vapor density	: Ultra Pure Water for CE	0.62 [Air = 1]
	: Cation Buffer for CE - pH 3.2	<1 [Air = 1]
	: Cation Test Sample for CE	Not available.
Relative density	: Ultra Pure Water for CE	1
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	1.008 [Water = 1]
Solubility	: Ultra Pure Water for CE	Easily soluble in the following materials: cold water and hot water.
	: Cation Buffer for CE - pH 3.2	Easily soluble in the following materials: cold water and hot water.
	: Cation Test Sample for CE	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Ultra Pure Water for CE	-1.38
	: Cation Buffer for CE - pH 3.2	Not available.
	: Cation Test Sample for CE	Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature	: Ultra Pure Water for CE	Not applicable.
	Cation Buffer for CE - pH 3.2	Not available.
	Cation Test Sample for CE	Not available.
Decomposition temperature	: Ultra Pure Water for CE	Not available.
	Cation Buffer for CE - pH 3.2	Not available.
	Cation Test Sample for CE	Not available.
Viscosity	: Ultra Pure Water for CE	Not available.
	Cation Buffer for CE - pH 3.2	Not available.
	Cation Test Sample for CE	Not available.

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.
	Cation Buffer for CE - pH 3.2	No specific test data related to reactivity available for this product or its ingredients.
	Cation Test Sample for CE	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.
	Cation Buffer for CE - pH 3.2	The product is stable.
	Cation Test Sample for CE	The product is stable.
10.3 Possibility of hazardous reactions	: Ultra Pure Water for CE	Under normal conditions of storage and use, hazardous reactions will not occur.
	Cation Buffer for CE - pH 3.2	Under normal conditions of storage and use, hazardous reactions will not occur.
	Cation Test Sample for CE	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.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.
10.5 Incompatible materials	: Ultra Pure Water for CE	May react or be incompatible with oxidizing materials.
	Cation Buffer for CE - pH 3.2	May react or be incompatible with oxidizing materials.
	Cation Test Sample for CE	May react or be incompatible with oxidizing 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.
	Cation Buffer for CE - pH 3.2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Cation Test Sample for CE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	Not available. Not available. Not available.
---	---	--

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No specific data. No specific data. No specific data.
Inhalation	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No specific data. No specific data. No specific data.

Section 11. Toxicological information

Skin contact	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.
Ingestion	: <input checked="" type="checkbox"/> Ultra Pure Water for CE	No specific data.
	Cation Buffer for CE - pH 3.2	No specific data.
	Cation Test Sample for CE	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: <input checked="" type="checkbox"/> Ultra Pure Water for CE Cation Buffer for CE - pH 3.2 Cation Test Sample for CE	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Ultra Pure Water for CE Water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Ultra Pure Water for CE Water	-	-	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.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.








Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN3316	UN3316	UN3316	UN3316	UN3316
UN proper shipping name	Chemical kits	CHEMICAL KIT	EQUIPO QUIMICO	CHEMICAL KIT	Chemical kit
Transport hazard class(es)	9 	9  	9 	9  	9 
Packing group	II	II	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification

- : **Reportable quantity** 30000 lbs / 13620 kg. The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials.
- Limited quantity** Yes.
- Packaging instruction** Exceptions: 161. Non-bulk: 161. Bulk: None.
- Quantity limitation** Passenger aircraft/rail: 10 kg. Cargo aircraft: 10 kg.
- Special provisions** 15

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.
- Passenger Carrying Road or Rail Index** 10
- Special provisions** 65, 141

Mexico Classification

IMDG

- : **Special provisions** 251, 340
- : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- Emergency schedules** F-A, _S-P_
- Special provisions** 251, 340

IATA

- : The environmentally hazardous substance mark may appear if required by other transportation regulations.
- 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

- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

- Transport in bulk according to 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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 Clean Water Act (CWA) 307: Copper sulphate
 Clean Water Act (CWA) 311: Copper sulphate; Formic acid; nitric acid; Sodium

Clean Air Act Section 112 : Not listed
 (b) Hazardous Air
 Pollutants (HAPs)

Clean Air Act Section 602 : Not listed
 Class I Substances

Clean Air Act Section 602 : Not listed
 Class II Substances

DEA List I Chemicals : Not listed
 (Precursor Chemicals)

DEA List II Chemicals : Not listed
 (Essential Chemicals)

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
<input checked="" type="checkbox"/> Cation Test Sample for CE nitric acid	≤0.1	Yes.	1000	85.7	1000	85.7

SARA 304 RQ : 30150753.8 lbs / 13688442.2 kg

SARA 311/312

Classification : Ultra Pure Water for CE : Not applicable.
 Cation Buffer for CE - pH 3.2 : Not applicable.
 Cation Test Sample for CE : Not applicable.

Composition/information on ingredients

No products were found.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

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.

Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: <input checked="" type="checkbox"/> Not determined.
Canada	: Not determined.
China	: <input checked="" type="checkbox"/> Not determined.
Europe	: Not determined.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: All components are listed or exempted.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: <input checked="" type="checkbox"/> Not determined.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Other information

History

Date of issue	: 08/03/2017
Date of previous issue	: 11/24/2015.
Version	: 3

Indicates information that has changed from previously issued version.

Notice to reader

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