

# SAFETY DATA SHEET



Plant RNA Isolation Mini Kit, Part Number 5188-2780

## Section 1. Identification

**Product identifier** : Plant RNA Isolation Mini Kit, Part Number 5188-2780  
**Part No. (Chemical Kit)** : 5188-2780  
**Part No.** :  Nuclease-Free Water 5190-0432  
 Plant Extraction Solution 5190-0435  
 Wash Solution 5190-0436

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

Analytical reagent.  
 Nuclease-Free Water 25 ml  
 Plant Extraction Solution 50 ml  
 Wash Solution 19.5 ml

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
 679 Springvale Road  
 Mulgrave  
 Victoria 3170, Australia  
 1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(61)-290372994

## Section 2. Hazard(s) identification

### Classification of the substance or mixture

**Plant Extraction Solution**  
 H302 ACUTE TOXICITY (oral) - Category 4  
 H315 SKIN CORROSION/IRRITATION - Category 2  
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

Plant Extraction Solution Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%  
 Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%  
 Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%

Plant Extraction Solution Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2%

### GHS label elements

**Hazard pictograms** :  Plant Extraction Solution

**Signal word** :  Nuclease-Free Water No signal word.  
 Plant Extraction Solution WARNING  
 Wash Solution No signal word.

**Hazard statements** :  Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution H302 - Harmful if swallowed.  
 H319 - Causes serious eye irritation.  
 H315 - Causes skin irritation.  
 Wash Solution No known significant effects or critical hazards.

### Precautionary statements

## Section 2. Hazard(s) identification

<b>Prevention</b>	: Nuclease-Free Water Plant Extraction Solution	Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
<b>Response</b>	: Wash Solution Nuclease-Free Water Plant Extraction Solution	Not applicable. P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. P302 + P352 + P362 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
<b>Storage</b>	: Wash Solution Nuclease-Free Water Plant Extraction Solution Wash Solution	Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: Nuclease-Free Water Plant Extraction Solution	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: Wash Solution Nuclease-Free Water Plant Extraction Solution Wash Solution	Not applicable. Not applicable. Not applicable.
<b>Other hazards which do not result in classification</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	None known. None known. None known.

## Section 3. Composition and ingredient information

<b>Substance/mixture</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	Substance Mixture Mixture
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### CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<b>Nuclease-Free Water</b> Nuclease-Free water	100	7732-18-5
<b>Plant Extraction Solution</b> Guanidinium chloride Polyethylene glycol	≥30 - ≤60 ≤3	50-01-1 25322-68-3

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

### Description of necessary first aid measures

<b>Eye contact</b>	: Nuclease-Free Water	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.
	Plant Extraction Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	Wash Solution	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.
<b>Inhalation</b>	: Nuclease-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Plant Extraction Solution	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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Wash Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: Nuclease-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Plant Extraction Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Wash Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: Nuclease-Free Water	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.
	Plant Extraction Solution	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If

## Section 4. First aid measures

Wash Solution

necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Wash 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.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. Causes serious eye irritation. No known significant effects or critical hazards.
<b>Inhalation</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. Causes skin irritation. No known significant effects or critical hazards.
<b>Ingestion</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. Harmful if swallowed. No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: Nuclease-Free Water Plant Extraction Solution	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No specific data. No specific data. No specific data.
<b>Skin contact</b>	: Nuclease-Free Water Plant Extraction Solution	No specific data. Adverse symptoms may include the following: irritation redness
<b>Ingestion</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No specific data. No specific data. No specific data.

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

<b>Notes to physician</b>	: Nuclease-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Plant Extraction Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Wash Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

## Section 4. First aid measures

<b>Specific treatments</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: Nuclease-Free Water  Plant Extraction Solution  Wash Solution	No action shall be taken involving any personal risk or without suitable training. 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. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: Nuclease-Free Water  Plant Extraction Solution  Wash Solution	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	None known. None known. None known.
<b>Specific hazards arising from the chemical</b>	: Nuclease-Free Water  Plant Extraction Solution  Wash Solution	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: Nuclease-Free Water Plant Extraction Solution  Wash Solution	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds No specific data.
<b>Special protective actions for fire-fighters</b>	: Nuclease-Free Water  Plant Extraction Solution  Wash Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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.

## Section 5. Firefighting measures

<b>Special protective equipment for fire-fighters</b>	: Nuclease-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Plant Extraction Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Wash Solution	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

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: Nuclease-Free Water	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.
	Plant Extraction Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Wash Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	: Nuclease-Free Water	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".
	Plant Extraction Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Wash Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
<b>Environmental precautions</b>	: Nuclease-Free Water	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).
	Plant Extraction Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Wash Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Section 6. Accidental release measures

soil or air).

### Methods and material for containment and cleaning up

**Methods for cleaning up** : Nuclease-Free Water

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.

Plant Extraction Solution

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Wash Solution

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Nuclease-Free Water

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

Plant Extraction Solution

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Wash Solution

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

**Advice on general occupational hygiene** : Nuclease-Free Water

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.

Plant Extraction Solution

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Wash Solution

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.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Nuclease-Free Water

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.

Plant Extraction Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Wash Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Plant Extraction Solution Polyethylene glycol	<b>DFG MAC-values list (Germany, 7/2015).</b> PEAK: 8000 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Form: Inhalable fraction TWA: 1000 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction

**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.



## Section 8. Exposure controls and personal protection

- 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.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Liquid. Liquid. Liquid.
<b>Colour</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Colourless. Not available. Not available.
<b>Odour</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Odourless. Not available. Not available.
<b>Odour threshold</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Not available. Not available. Not available.
<b>pH</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	7 6.6 8
<b>Melting point</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	0°C (32°F) Not available. 0°C (32°F)
<b>Boiling point</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	100°C (212°F) Not available. 100°C (212°F)
<b>Flash point</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Not applicable. Not available. Not available.
<b>Evaporation rate</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Not available. Not available. Not available.
<b>Flammability (solid, gas)</b>	:	<input checked="" type="checkbox"/> Nuclease-Free Water <input checked="" type="checkbox"/> Plant Extraction Solution <input checked="" type="checkbox"/> Wash Solution	Not applicable. Not applicable. Not applicable.

## Section 9. Physical and chemical properties

<b>Lower and upper explosive (flammable) limits</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	Not available. Not available. Not available.
<b>Vapour pressure</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	3.2 kPa (23.8 mm Hg) [room temperature] Not available. Not available.
<b>Vapour density</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	0.62 [Air = 1] Not available. Not available.
<b>Relative density</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	1 Not available. Not available.
<b>Solubility</b>	: Nuclease-Free Water  Plant Extraction Solution Wash Solution	Easily soluble in the following materials: cold water and hot water. Not available. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	-1.38 Not available. Not available.
<b>Auto-ignition temperature</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	Not applicable. Not available. Not available.
<b>Decomposition temperature</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	Not available. Not available. Not available.
<b>Viscosity</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	Not available. Not available. Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: Nuclease-Free Water  Plant Extraction Solution  Wash Solution	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	The product is stable. The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: Nuclease-Free Water  Plant Extraction Solution  Wash Solution	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	No specific data. No specific data. No specific data.
<b>Incompatible materials</b>	: Nuclease-Free Water Plant Extraction Solution Wash Solution	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.

## Section 10. Stability and reactivity

<b>Hazardous decomposition products</b>	: Nuclease-Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Plant Extraction Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Wash Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Plant Extraction Solution Guanidinium chloride	LC50 Inhalation Dusts and mists	Rat - Male, Female	5.319 mg/l	4 hours
	LD50 Oral	Rat	475 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Plant Extraction Solution Guanidinium chloride	Eyes - Moderate irritant	Rabbit	-	81400 Micrograms	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
Polyethylene glycol	Skin - Severe irritant	Rabbit	-	-	-
	Eyes - Irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

#### Sensitisation

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.

## Section 11. Toxicological information

**Information on likely routes of exposure** : Nuclease-Free Water Not available.  
 Plant Extraction Solution Routes of entry anticipated: Oral, Dermal, Inhalation.  
 Wash Solution Not available.

### Potential acute health effects

**Eye contact** : Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution Causes serious eye irritation.  
 Wash Solution No known significant effects or critical hazards.

**Inhalation** : Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution No known significant effects or critical hazards.  
 Wash Solution No known significant effects or critical hazards.

**Skin contact** : Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution Causes skin irritation.  
 Wash Solution No known significant effects or critical hazards.

**Ingestion** : Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution Harmful if swallowed.  
 Wash Solution No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Nuclease-Free Water No specific data.  
 Plant Extraction Solution Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness  
 Wash Solution No specific data.

**Inhalation** : Nuclease-Free Water No specific data.  
 Plant Extraction Solution No specific data.  
 Wash Solution No specific data.

**Skin contact** : Nuclease-Free Water No specific data.  
 Plant Extraction Solution Adverse symptoms may include the following:  
 irritation  
 redness  
 Wash Solution No specific data.

**Ingestion** : Nuclease-Free Water No specific data.  
 Plant Extraction Solution No specific data.  
 Wash Solution 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

Not available.

**General** : Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution No known significant effects or critical hazards.  
 Wash Solution No known significant effects or critical hazards.

**Carcinogenicity** : Nuclease-Free Water No known significant effects or critical hazards.  
 Plant Extraction Solution No known significant effects or critical hazards.  
 Wash Solution No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Mutagenicity</b>	: <input checked="" type="checkbox"/> Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	: <input checked="" type="checkbox"/> Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: <input checked="" type="checkbox"/> Nuclease-Free Water Plant Extraction Solution Wash Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: <input checked="" type="checkbox"/> Nuclease-Free Water Plant Extraction Solution Wash Solution	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

Route	ATE value
Plant Extraction Solution Oral	904.8 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Plant Extraction Solution Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> Nuclease-Free Water Nuclease-Free water	-	100 % - 28 days	-	-
<b>Plant Extraction Solution</b> Guanidinium chloride	OECD 301C Ready Biodegradability - Modified MITI Test (I)	0 % - Readily - 33 days	-	Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> Nuclease-Free Water Nuclease-Free water	-	-	Readily
<b>Plant Extraction Solution</b> Guanidinium chloride	-	-	Inherent

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> Nuclease-Free Water Nuclease-Free water	-1.38	-	low
<b>Plant Extraction Solution</b> Guanidinium chloride	-1.7	-	low
Polyethylene glycol	-	3.2	low

## Section 12. Ecological information

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

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

## Section 13. Disposal considerations

**Disposal methods** : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

**ADG / IMDG / IATA** : Not regulated as Dangerous Goods according to the ADG Code .

**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

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### 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.

## Section 15. Regulatory information

<b>Canada</b>	: At least one component is not listed in DSL but all such components are listed in NDSL.
<b>China</b>	: All components are listed or exempted.
<b>Europe</b>	: All components are listed or exempted.
<b>Japan</b>	: <input checked="" type="checkbox"/> <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: All components are listed or exempted.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

## Section 16. Any other relevant information

### History

<b>Date of issue/Date of revision</b>	: 14/08/2017
<b>Date of previous issue</b>	: 03/02/2016.
<b>Version</b>	: 5

### Key to abbreviations

: ADG = Australian Dangerous Goods
: ATE = Acute Toxicity Estimate
: BCF = Bioconcentration Factor
: GHS = Globally Harmonized System of Classification and Labelling of Chemicals
: IATA = International Air Transport Association
: IBC = Intermediate Bulk Container
: IMDG = International Maritime Dangerous Goods
: LogPow = logarithm of the octanol/water partition coefficient
: MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
: NOHSC = National Occupational Health and Safety Commission
: SUSMP = Standard Uniform Schedule of Medicine and Poisons
: UN = United Nations

### Procedure used to derive the classification

Classification	Justification
<b>Plant Extraction Solution</b> Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319	Calculation method Calculation method Calculation method

**References** : Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

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