Section 1. Identification

1.1 Product identifier

Product name: Gene Expression Wash Pack, Part Number 5188-5327
Part No. (Chemical Kit): 5188-5327
Part No.: Agilent Gene Expression Wash Buffer 1 5188-5325
Agilent Gene Expression Wash Buffer 2 5188-5326
10%Triton X-102 5188-5903
Validation date: 5/31/2017

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

Material uses:
- Analytical chemistry.
  - Agilent Gene Expression Wash Buffer 1 4 L
  - Agilent Gene Expression Wash Buffer 2 4 L
  - 10%Triton X-102 8.1 ml (1.35 ml / Tube)

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: Agilent Gene Expression Wash Buffer 1
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.

Agilent Gene Expression Wash Buffer 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.

10%Triton X-102
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

10%Triton X-102
- H315 SKIN IRRITATION - Category 2
- H318 SERIOUS EYE DAMAGE - Category 1

Ingredients of unknown toxicity: 10%Triton X-102
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%

Date of issue: 05/31/2017
Section 2. Hazards identification

2.2 GHS label elements

Hazard pictograms : 10% Triton X-102

Signal word : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
No signal word.

Hazard statements : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
No known significant effects or critical hazards.

Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
Danger

H318 - Causes serious eye damage.
H315 - Causes skin irritation.

Precautionary statements

Prevention : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
Not applicable.

Response : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
Not applicable.

Storage : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
Not applicable.

Disposal : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
Not applicable.

Supplemental label elements : Agilent Gene Expression Wash Buffer 1
Agilent Gene Expression Wash Buffer 2
10% Triton X-102
None known.

2.3 Other hazards
Section 2. Hazards identification

Hazards not otherwise classified:

- Agilent Gene Expression Wash Buffer 1: None known.
- Agilent Gene Expression Wash Buffer 2: None known.
- 10% Triton X-102: None known.

Section 3. Composition/information on ingredients

Substance/mixture: Agilent Gene Expression Wash Buffer 1
- Mixture

Substance/mixture: Agilent Gene Expression Wash Buffer 2
- Mixture

Substance/mixture: 10% Triton X-102
- Mixture

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102</td>
<td>≥10 - ≤25</td>
<td>9036-19-5</td>
</tr>
</tbody>
</table>

Poly(oxy-1,2-ethanediyl), .alpha.-(1,1,3,3-tetramethylbutyl)phenyl-.omega.-hydroxy-

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:

- Agilent Gene Expression Wash Buffer 1: 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.
- Agilent Gene Expression Wash Buffer 2: 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.
- 10% Triton X-102: 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.

Inhalation:

- Agilent Gene Expression Wash Buffer 1: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Agilent Gene Expression Wash Buffer 2: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- 10% Triton X-102: 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
## Section 4. First aid measures

<table>
<thead>
<tr>
<th><strong>Skin contact</strong></th>
<th><strong>Agilent Gene Expression Wash Buffer 1</strong></th>
<th>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Agilent Gene Expression Wash Buffer 2</strong></td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</td>
</tr>
<tr>
<td></td>
<td><strong>10% Triton X-102</strong></td>
<td>Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash 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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ingestion</strong></th>
<th><strong>Agilent Gene Expression Wash Buffer 1</strong></th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Agilent Gene Expression Wash Buffer 2</strong></td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td><strong>10% Triton X-102</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>

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

**Potential acute health effects**

**Date of issue:** 05/31/2017
# Section 4. First aid measures

### Eye contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Causes skin irritation.</td>
</tr>
</tbody>
</table>

### Inhalation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
</tr>
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<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Causes serious eye damage.</td>
</tr>
</tbody>
</table>

### Skin contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Causes skin irritation.</td>
</tr>
</tbody>
</table>

### Ingestion

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<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
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<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

### Over-exposure signs/symptoms

#### Eye contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Adverse symptoms may include the following:</td>
</tr>
<tr>
<td></td>
<td>pain</td>
</tr>
<tr>
<td></td>
<td>watering</td>
</tr>
<tr>
<td></td>
<td>redness</td>
</tr>
</tbody>
</table>

#### Inhalation

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

#### Skin contact

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
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</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Adverse symptoms may include the following:</td>
</tr>
<tr>
<td></td>
<td>pain or irritation</td>
</tr>
<tr>
<td></td>
<td>redness</td>
</tr>
<tr>
<td></td>
<td>blistering may occur</td>
</tr>
</tbody>
</table>

#### Ingestion

<table>
<thead>
<tr>
<th>Substance</th>
<th>Symptoms/Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Adverse symptoms may include the following:</td>
</tr>
<tr>
<td></td>
<td>stomach pains</td>
</tr>
</tbody>
</table>

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary
Section 4. First aid measures

Notes to physician:

- **Agilent Gene Expression Wash Buffer 1**
  - No action shall be taken involving any personal risk or without suitable training.
- **Agilent Gene Expression Wash Buffer 2**
  - No action shall be taken involving any personal risk or without suitable training.
- **10% Triton X-102**
  - 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.

Protection of first-aiders:

- **Agilent Gene Expression Wash Buffer 1**
  - No action shall be taken involving any personal risk or without suitable training.
- **Agilent Gene Expression Wash Buffer 2**
  - No action shall be taken involving any personal risk or without suitable training.
- **10% Triton X-102**
  - 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.

Specific treatments:

- **Agilent Gene Expression Wash Buffer 1**
  - No specific treatment.
- **Agilent Gene Expression Wash Buffer 2**
  - No specific treatment.
- **10% Triton X-102**
  - No specific treatment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media:

- **Suitable extinguishing media**
  - **Agilent Gene Expression Wash Buffer 1**
  - Use an extinguishing agent suitable for the surrounding fire.
  - **Agilent Gene Expression Wash Buffer 2**
  - Use an extinguishing agent suitable for the surrounding fire.
  - **10% Triton X-102**
  - Use an extinguishing agent suitable for the surrounding fire.

- **Unsuitable extinguishing media**
  - **Agilent Gene Expression Wash Buffer 1**
  - None known.
  - **Agilent Gene Expression Wash Buffer 2**
  - None known.
  - **10% Triton X-102**
  - None known.

5.2 Special hazards arising from the substance or mixture:

- **Specific hazards arising from the chemical**
  - **Agilent Gene Expression Wash Buffer 1**
  - In a fire or if heated, a pressure increase will occur and the container may burst.
  - **Agilent Gene Expression Wash Buffer 2**
  - In a fire or if heated, a pressure increase will occur and the container may burst.
  - **10% Triton X-102**
  - In a fire or if heated, a pressure increase will occur and the container may burst.
## Section 5. Fire-fighting measures

| Hazardous thermal decomposition products | Agilent Gene Expression Wash Buffer 1 | No specific data. | Agilent Gene Expression Wash Buffer 2 | No specific data. | 10% Triton X-102 | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides |

### 5.3 Advice for firefighters

| Special protective actions for fire-fighters | Agilent Gene Expression Wash Buffer 1 | 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. | Agilent Gene Expression Wash Buffer 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. | 10% Triton X-102 | 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 | Agilent Gene Expression Wash Buffer 1 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. | Agilent Gene Expression Wash Buffer 2 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. | 10% Triton X-102 | 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 | Agilent Gene Expression Wash Buffer 1 | 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. | Agilent Gene Expression Wash Buffer 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. | 10% Triton X-102 | 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when... |
### Section 6. Accidental release measures

#### For emergency responders

<table>
<thead>
<tr>
<th>Product</th>
<th>Action Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>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 &quot;For non-emergency personnel&quot;.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>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 &quot;For non-emergency personnel&quot;.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>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 &quot;For non-emergency personnel&quot;.</td>
</tr>
</tbody>
</table>

#### 6.2 Environmental precautions

<table>
<thead>
<tr>
<th>Product</th>
<th>Action Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>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).</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>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).</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>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).</td>
</tr>
</tbody>
</table>

#### 6.3 Methods and materials for containment and cleaning up

<table>
<thead>
<tr>
<th>Product</th>
<th>Action Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>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.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>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.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>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.</td>
</tr>
</tbody>
</table>
# Section 7. Handling and storage

## 7.1 Precautions for safe handling

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Advice on general occupational hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>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.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>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.</td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>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.</td>
</tr>
</tbody>
</table>

## 7.2 Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Protective measures</th>
<th>Advice on general occupational hygiene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>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. 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.</td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td></td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td></td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

10% Triton X-102

- Containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
- 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 locked up. 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.

7.3 Specific end use(s)

Recommendations:
- Agilent Gene Expression Wash Buffer 1: Industrial applications, Professional applications.
- Agilent Gene Expression Wash Buffer 2: Industrial applications, Professional applications.
- 10% Triton X-102: Not applicable.

Industrial sector specific solutions:
- Agilent Gene Expression Wash Buffer 1: Not applicable.
- Agilent Gene Expression Wash Buffer 2: Not applicable.
- 10% Triton X-102: Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102</td>
<td>None.</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</td>
<td>None.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

- Appropriate engineering controls: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

- 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.

Date of issue: 05/31/2017
**Section 8. Exposure controls/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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**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**

**9.1 Information on basic physical and chemical properties**

**Appearance**

**Physical state**
- Agilent Gene Expression Wash Buffer 1: Liquid.
- Agilent Gene Expression Wash Buffer 2: Liquid.
- 10% Triton X-102: Liquid.

**Color**
- Agilent Gene Expression Wash Buffer 1: Not available.
- Agilent Gene Expression Wash Buffer 2: Not available.
- 10% Triton X-102: Not available.

**Odor**
- Agilent Gene Expression Wash Buffer 1: Odorless.
- Agilent Gene Expression Wash Buffer 2: Odorless.
- 10% Triton X-102: Odorless.

**Odor threshold**
- Agilent Gene Expression Wash Buffer 1: Not available.
- Agilent Gene Expression Wash Buffer 2: Not available.
- 10% Triton X-102: Not available.

**pH**
- Agilent Gene Expression Wash Buffer 1: 8.4
- Agilent Gene Expression Wash Buffer 2: 8.1
- 10% Triton X-102: 8 to 8.4

**Date of issue**: 05/31/2017
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Agilent Gene Expression Wash Buffer 1</th>
<th>Agilent Gene Expression Wash Buffer 2</th>
<th>10% Triton X-102</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Melting point</strong></td>
<td>0°C (32°F)</td>
<td>0°C (32°F)</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>100°C (212°F)</td>
<td>100°C (212°F)</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not applicable.</td>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Lower and upper explosive (flammable) limits</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
### Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Agilent Gene Expression Wash Buffer 1</th>
<th>Agilent Gene Expression Wash Buffer 2</th>
<th>10% Triton X-102</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid: No specific data.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.
Section 10. Stability and reactivity

10.6 Hazardous decomposition products

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10% Triton X-102</td>
<td>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2800 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102</td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>1%</td>
<td>-</td>
</tr>
</tbody>
</table>

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.
### Section 11. Toxicological information

#### Information on the likely routes of exposure:

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>Product</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Routes of entry anticipated: Oral, Dermal, Inhalation.</td>
</tr>
</tbody>
</table>

#### Potential acute health effects:

<table>
<thead>
<tr>
<th>Route</th>
<th>Product</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Route</th>
<th>Product</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Adverse symptoms may include the following: pain, watering, redness</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>No specific data.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Adverse symptoms may include the following: pain or irritation, redness, blistering may occur</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Agilent Gene Expression Wash Buffer 1</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>No specific data.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Adverse symptoms may include the following: stomach pains</td>
</tr>
</tbody>
</table>

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Section 11. Toxicological information

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 : Agilent Gene Expression Wash Buffer 1
          Agilent Gene Expression Wash Buffer 2
          10% Triton X-102
          No known significant effects or critical hazards.

Carcinogenicity : Agilent Gene Expression Wash Buffer 1
                   Agilent Gene Expression Wash Buffer 2
                   10% Triton X-102
                   No known significant effects or critical hazards.

Mutagenicity : Agilent Gene Expression Wash Buffer 1
               Agilent Gene Expression Wash Buffer 2
               10% Triton X-102
               No known significant effects or critical hazards.

Teratogenicity : Agilent Gene Expression Wash Buffer 1
                Agilent Gene Expression Wash Buffer 2
                10% Triton X-102
                No known significant effects or critical hazards.

Developmental effects : Agilent Gene Expression Wash Buffer 1
                        Agilent Gene Expression Wash Buffer 2
                        10% Triton X-102
                        No known significant effects or critical hazards.

Fertility effects : Agilent Gene Expression Wash Buffer 1
                   Agilent Gene Expression Wash Buffer 2
                   10% Triton X-102
                   No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102 Oral</td>
<td>28000 mg/kg</td>
</tr>
</tbody>
</table>

Date of issue : 05/31/2017
Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102</td>
<td>Acute EC50 210 µg/l Fresh water</td>
<td>Algae - Pseudokirchneriella subcapitata</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 10800 µg/l Marine water</td>
<td>Crustaceans - Pandalus montagui - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 8600 to 9800 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 7200 µg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Triton X-102</td>
<td>3.77</td>
<td>78.67</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : 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. 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.

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.

Date of issue : 05/31/2017
## Section 13. Disposal considerations

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

### DOT / TDG / Mexico / IMDG / IATA

Not regulated.

### 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

<table>
<thead>
<tr>
<th>U.S. Federal regulations</th>
<th>TSCA 8(a) PAIR: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-</th>
<th>TSCA 8(a) CDR Exempt/Partial exemption: Not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)</td>
<td>Not listed</td>
<td>Clean Water Act (CWA) 311: Sodium hydroxide</td>
</tr>
<tr>
<td>Clean Air Act Section 602 Class I Substances</td>
<td>Not listed</td>
<td></td>
</tr>
<tr>
<td>Clean Air Act Section 602 Class II Substances</td>
<td>Not listed</td>
<td></td>
</tr>
<tr>
<td>DEA List I Chemicals (Precursor Chemicals)</td>
<td>Not listed</td>
<td></td>
</tr>
<tr>
<td>DEA List II Chemicals (Essential Chemicals)</td>
<td>Not listed</td>
<td></td>
</tr>
</tbody>
</table>

### SARA 302/304

| Composition/information on ingredients | No products were found. |
| SARA 304 RQ | Not applicable. |
| SARA 311/312 | |

<table>
<thead>
<tr>
<th>Classification</th>
<th>Agilent Gene Expression Wash Buffer 1</th>
<th>Not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agilent Gene Expression Wash Buffer 2</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>10% Triton X-102</td>
<td>Immediate (acute) health hazard</td>
</tr>
</tbody>
</table>

### Composition/information on ingredients

| Date of issue: | 05/31/2017 |
Section 15. Regulatory information

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Fire hazard</th>
<th>Sudden release of pressure</th>
<th>Reactive</th>
<th>Immediate (acute) health hazard</th>
<th>Delayed (chronic) health hazard</th>
</tr>
</thead>
</table>

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.
California Prop. 65: Not available.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montréal 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): Not determined.

Malaysia: Not determined.
New Zealand: All components are listed or exempted.
Philippines: All components are listed or exempted.
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.
# Section 16. Other information

**History**

- **Date of issue**: 05/31/2017
- **Date of previous issue**: 10/28/2015
- **Version**: 4

[†] Indicates information that has changed from previously issued version.

**Notice to reader**

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