SAFETY DATA SHEET
DNA Extraction Kit, Part Number 200600

Section 1. Identification

1.1 Product identifier
Product name : DNA Extraction Kit, Part Number 200600
Part no. (chemical kit) : 200600
Part no. DNA Extraction RNase 200600-81
DNA Extraction Pronase 200600-82
DNA Extraction Solution 1 200600-13
DNA Extraction Solution 2 200600-14
DNA Extraction Solution 3 200600-15

Validation date : 11/7/2018

1.2 Relevant identified uses of the substance or mixture and uses advised against
Material uses : Analytical reagent.
DNA Extraction RNase 1 mL (10 mg/mL)
DNA Extraction Pronase 2 mL (225 mg/mL)
DNA Extraction Solution 1 3X Concentration 500 mL
DNA Extraction Solution 2 420 mL
DNA Extraction Solution 3 150 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 : DNA Extraction RNase
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DNA Extraction Pronase
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DNA Extraction Solution 1
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DNA Extraction Solution 2
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DNA Extraction Solution 3
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture
DNA Extraction RNase
H334 RESPIRATORY SENSITIZATION - Category 1

DNA Extraction Pronase
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H334 RESPIRATORY SENSITIZATION - Category 1
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

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DNA Extraction Solution 1
H318  SERIOUS EYE DAMAGE - Category 1
H402  AQUATIC HAZARD (ACUTE) - Category 3
H412  AQUATIC HAZARD (LONG-TERM) - Category 3

DNA Extraction Solution 2
H402  AQUATIC HAZARD (ACUTE) - Category 3

DNA Extraction Solution 3
H319  EYE IRRITATION - Category 2A
Ingredients of unknown toxicity:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%</th>
<th>Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%</th>
<th>Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2 GHS label elements
Hazard pictograms:

<table>
<thead>
<tr>
<th>Hazard pictogram</th>
<th>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1%</th>
<th>Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 22.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 2. Hazards identification

Signal word:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Signal Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>Danger</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td>Danger</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>Danger</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>No signal word.</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>Warning</td>
</tr>
</tbody>
</table>

Hazard statements:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td>H319 - Causes serious eye irritation.</td>
</tr>
<tr>
<td></td>
<td>H315 - Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td>H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.</td>
</tr>
<tr>
<td></td>
<td>H335 - May cause respiratory irritation.</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>H318 - Causes serious eye damage.</td>
</tr>
<tr>
<td></td>
<td>H412 - Harmful to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>H402 - Harmful to aquatic life.</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>H319 - Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

Precautionary statements

Prevention:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Precautionary Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>P284 - Wear respiratory protection.</td>
</tr>
<tr>
<td></td>
<td>P261 - Avoid breathing vapor.</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td>P280 - Wear protective gloves. Wear eye or face protection.</td>
</tr>
<tr>
<td></td>
<td>P284 - Wear respiratory protection.</td>
</tr>
<tr>
<td></td>
<td>P271 - Use only outdoors or in a well-ventilated area.</td>
</tr>
<tr>
<td></td>
<td>P261 - Avoid breathing vapor.</td>
</tr>
<tr>
<td></td>
<td>P264 - Wash hands thoroughly after handling.</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>P280 - Wear eye or face protection.</td>
</tr>
<tr>
<td></td>
<td>P273 - Avoid release to the environment.</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>P273 - Avoid release to the environment.</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>P280 - Wear eye or face protection.</td>
</tr>
<tr>
<td></td>
<td>P264 - Wash hands thoroughly after handling.</td>
</tr>
</tbody>
</table>

Response:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>P304 + P341 (OSHA) - IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.</td>
</tr>
<tr>
<td></td>
<td>P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or physician.</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td>P304 + P341 (OSHA) + P312 - IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</td>
</tr>
<tr>
<td></td>
<td>P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or physician.</td>
</tr>
<tr>
<td></td>
<td>P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.</td>
</tr>
<tr>
<td></td>
<td>P332 + P313 - If skin irritation occurs: Get medical attention.</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td></td>
<td>P337 + P313 - If eye irritation persists: Get medical attention.</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or</td>
</tr>
</tbody>
</table>
Section 2. Hazards identification

DNA Extraction Solution 2  Not applicable.
DNA Extraction Solution 3  Not applicable.

Storage:
DNA Extraction RNase  Not applicable.
DNA Extraction Pronase  P405 - Store locked up.
DNA Extraction Solution 1  Not applicable.
DNA Extraction Solution 2  Not applicable.
DNA Extraction Solution 3  Not applicable.

Disposal:
DNA Extraction RNase  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
DNA Extraction Pronase  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
DNA Extraction Solution 1  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
DNA Extraction Solution 2  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
DNA Extraction Solution 3  Not applicable.

Supplemental label elements:
DNA Extraction RNase  None known.
DNA Extraction Pronase  None known.
DNA Extraction Solution 1  None known.
DNA Extraction Solution 2  None known.
DNA Extraction Solution 3  None known.

2.3 Other hazards

Hazards not otherwise classified:
DNA Extraction RNase  None known.
DNA Extraction Pronase  None known.
DNA Extraction Solution 1  None known.
DNA Extraction Solution 2  None known.
DNA Extraction Solution 3  None known.

Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Percentage</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase Mixtures</td>
<td>≤3</td>
<td>9001-99-4</td>
</tr>
<tr>
<td>DNA Extraction Pronase Mixtures</td>
<td>≥10 - ≤25</td>
<td>9036-06-0</td>
</tr>
<tr>
<td>DNA Extraction Solution 1 Mixtures</td>
<td>≤5</td>
<td>9002-93-1</td>
</tr>
</tbody>
</table>

Ingredient name

| DNA Extraction RNase Nuclease, ribo- | ≤3 | 9001-99-4 |
| DNA Extraction Pronase Proteinase, Streptomyces griseus | ≥10 - ≤25 | 9036-06-0 |
| DNA Extraction Solution 1 Polyoxyethylene octyl phenyl ether | ≤5 | 9002-93-1 |

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| DNA Extraction Solution 2 | Sodium dodecyl sulphate | <2.5 | 151-21-3 |
| DNA Extraction Solution 3 | Sodium chloride | ≥25 - ≤50 | 7647-14-5 |

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**

DNA Extraction RNase: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

DNA Extraction Pronase: 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.

DNA Extraction Solution 1: 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.

DNA Extraction Solution 2: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

DNA Extraction Solution 3: 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.

**Inhalation**

DNA Extraction RNase: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may
Section 4. First aid measures

DNA Extraction Pronase
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure.

DNA Extraction Solution 1
Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

DNA Extraction Solution 2
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.

DNA Extraction Solution 3
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.
## Section 4. First aid measures

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>DNA Extraction RNase</th>
<th>DNA Extraction Pronase</th>
<th>DNA Extraction Solution 1</th>
<th>DNA Extraction Solution 2</th>
<th>DNA Extraction Solution 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.</td>
<td>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.</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>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before use.</td>
<td>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
<td>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 4. First aid measures

DNA Extraction Solution 1

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.

DNA Extraction Solution 2

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

DNA Extraction Solution 3

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects
### Section 4. First aid measures

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>DNA Extraction RNase</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction Pronase</td>
<td>Causes serious eye irritation.</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>Causes serious eye damage.</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>Causes serious eye irritation.</td>
<td></td>
</tr>
</tbody>
</table>

**Inhalation**

- DNA Extraction RNase: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- DNA Extraction Pronase: May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- DNA Extraction Solution 1: No known significant effects or critical hazards.
- DNA Extraction Solution 2: No known significant effects or critical hazards.
- DNA Extraction Solution 3: No known significant effects or critical hazards.

<table>
<thead>
<tr>
<th>Skin contact</th>
<th>DNA Extraction RNase</th>
<th>No known significant effects or critical hazards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction Pronase</td>
<td>Causes skin irritation.</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>No known significant effects or critical hazards.</td>
<td></td>
</tr>
</tbody>
</table>

**Ingestion**

- DNA Extraction RNase: No specific data.
- DNA Extraction Pronase: No specific data.
- DNA Extraction Solution 1: No specific data.
- DNA Extraction Solution 2: No specific data.
- DNA Extraction Solution 3: No specific data.

**Over-exposure signs/symptoms**

**Eye contact**

- DNA Extraction RNase: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- DNA Extraction Pronase: Adverse symptoms may include the following:
  - pain
  - watering
  - redness
- DNA Extraction Solution 1: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- DNA Extraction Solution 2: No specific data.
- DNA Extraction Solution 3: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness

**Inhalation**

- DNA Extraction RNase: Adverse symptoms may include the following:
  - wheezing and breathing difficulties
  - asthma
- DNA Extraction Pronase: Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - wheezing and breathing difficulties
  - asthma
- DNA Extraction Solution 1: No specific data.
- DNA Extraction Solution 2: No specific data.
- DNA Extraction Solution 3: No specific data.

**Skin contact**

- DNA Extraction RNase: No specific data.
- DNA Extraction Pronase: Adverse symptoms may include the following:
  - irritation
  - redness
- DNA Extraction Solution 1: Adverse symptoms may include the following:
  - pain or irritation
  - redness
  - blistering may occur

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Ingestion:
- DNA Extraction RNase: No specific data.
- DNA Extraction Pronase: No specific data.
- DNA Extraction Solution 1: Adverse symptoms may include the following: stomach pains.
- DNA Extraction Solution 2: No specific data.
- DNA Extraction Solution 3: No specific data.

Notes to physician:
- DNA Extraction RNase: 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.
- DNA Extraction Pronase: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- DNA Extraction Solution 1: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- DNA Extraction Solution 2: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- DNA Extraction Solution 3: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments:
- DNA Extraction RNase: No specific treatment.
- DNA Extraction Pronase: No specific treatment.
- DNA Extraction Solution 1: No specific treatment.
- DNA Extraction Solution 2: No specific treatment.

Protection of first-aiders:
- DNA Extraction RNase: 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.
- DNA Extraction Pronase: 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.
- DNA Extraction Solution 1: 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.
- DNA Extraction Solution 2: 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.
- DNA Extraction Solution 3: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to...
Section 4. First aid measures

the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

- DNA Extraction RNase: Use an extinguishing agent suitable for the surrounding fire.
- DNA Extraction Pronase: Use an extinguishing agent suitable for the surrounding fire.
- DNA Extraction Solution 1: Use an extinguishing agent suitable for the surrounding fire.
- DNA Extraction Solution 2: Use an extinguishing agent suitable for the surrounding fire.
- DNA Extraction Solution 3: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media:

- DNA Extraction RNase: None known.
- DNA Extraction Pronase: None known.
- DNA Extraction Solution 1: None known.
- DNA Extraction Solution 2: None known.
- DNA Extraction Solution 3: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical:

- DNA Extraction RNase: In a fire or if heated, a pressure increase will occur and the container may burst.
- DNA Extraction Pronase: In a fire or if heated, a pressure increase will occur and the container may burst.
- DNA Extraction Solution 1: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- DNA Extraction Solution 2: In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- DNA Extraction Solution 3: In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products:

- DNA Extraction RNase: Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides.
- DNA Extraction Pronase: No specific data.
- DNA Extraction Solution 1: Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
- DNA Extraction Solution 2: Decomposition products may include the following materials: carbon dioxide, carbon monoxide.

Date of issue: 11/07/2018
Section 5. Fire-fighting measures

DNA Extraction Kit, Part Number 200600

5.3 Advice for firefighters

Special protective actions for firefighters:

DNA Extraction RNase

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.

DNA Extraction Pronase

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.

DNA Extraction Solution 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.

DNA Extraction Solution 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.

DNA Extraction Solution 3

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters:

DNA Extraction RNase

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA Extraction Pronase

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA Extraction Solution 1

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA Extraction Solution 2

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

DNA Extraction Solution 3

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

Date of issue: 11/07/2018
Section 6. Accidental release measures

For non-emergency personnel

DNA Extraction RNase

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

DNA Extraction Pronase

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

DNA Extraction Solution 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

DNA Extraction Solution 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

DNA Extraction Solution 3

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

DNA Extraction RNase

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".

DNA Extraction Pronase

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".

DNA Extraction Solution 1

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".

DNA Extraction Solution 2

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".
Section 6. Accidental release measures

6.2 Environmental precautions

DNA Extraction Solution 3
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).

DNA Extraction RNase
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).

DNA Extraction Pronase
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). Water polluting material. May be harmful to the environment if released in large quantities.

DNA Extraction Solution 1
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). Water polluting material. May be harmful to the environment if released in large quantities.

DNA Extraction Solution 2
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).

DNA Extraction Solution 3
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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

DNA Extraction RNase
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.

DNA Extraction Pronase
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.

DNA Extraction Solution 1
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.

DNA Extraction Solution 2
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 6. Accidental release measures

DNA Extraction Solution 3

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

7.1 Precautions for safe handling

Protective measures: DNA Extraction RNase

Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

DNA Extraction Pronase

Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

DNA Extraction Solution 1

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

DNA Extraction Solution 2

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. 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.
## Section 7. Handling and storage

### Advice on general occupational hygiene

<table>
<thead>
<tr>
<th>Product</th>
<th>Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</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>DNA Extraction Pronase</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>DNA Extraction Solution 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>DNA Extraction Solution 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>DNA Extraction Solution 3</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>Product</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</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.</td>
</tr>
<tr>
<td>DNA Extraction Pronase</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.</td>
</tr>
</tbody>
</table>
Section 7. Handling and storage

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.

DNA Extraction Solution 1

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.

DNA Extraction Solution 2

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.

DNA Extraction Solution 3

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.

7.3 Specific end use(s)

Recommendations:
- DNA Extraction RNase: Industrial applications, Professional applications.
- DNA Extraction Pronase: Industrial applications, Professional applications.
- DNA Extraction Solution 1: Industrial applications, Professional applications.
- DNA Extraction Solution 2: Industrial applications, Professional applications.
- DNA Extraction Solution 3: Industrial applications, Professional applications.

Industrial sector specific solutions:
- DNA Extraction RNase: Not applicable.
- DNA Extraction Pronase: Not applicable.
- DNA Extraction Solution 1: Not applicable.
- DNA Extraction Solution 2: Not applicable.
- DNA Extraction Solution 3: Not applicable.

Date of issue: 11/07/2018
Section 8. Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>None.</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td>None.</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>None.</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>None.</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>None.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls: Use only with adequate ventilation. 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.

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.
Section 8. Exposure controls/personal protection

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 : DNA Extraction RNase Liquid.
DNA Extraction Pronase Liquid.
DNA Extraction Solution 1 Liquid.
DNA Extraction Solution 2 Liquid.
DNA Extraction Solution 3 Liquid.

Color : DNA Extraction RNase Not available.
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 Not available.
DNA Extraction Solution 3 Not available.

Odor : DNA Extraction RNase Not available.
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 Not available.
DNA Extraction Solution 3 Not available.

Odor threshold : DNA Extraction RNase Not available.
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 Not available.
DNA Extraction Solution 3 Not available.

pH : DNA Extraction RNase 7.5
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 7.6
DNA Extraction Solution 2 8
DNA Extraction Solution 3 Not available.

Melting point : DNA Extraction RNase 0°C (32°F)
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 0°C (32°F)
DNA Extraction Solution 3 Not available.

Boiling point : DNA Extraction RNase 100°C (212°F)
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 100°C (212°F)
DNA Extraction Solution 3 Not available.

Flash point : DNA Extraction RNase Not available.
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 Not available.
DNA Extraction Solution 3 Not available.

Evaporation rate : DNA Extraction RNase Not available.
DNA Extraction Pronase Not available.
DNA Extraction Solution 1 Not available.
DNA Extraction Solution 2 Not available.
DNA Extraction Solution 3 Not available.
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>DNA Extraction RNase</th>
<th>DNA Extraction Pronase</th>
<th>DNA Extraction Solution 1</th>
<th>DNA Extraction Solution 2</th>
<th>DNA Extraction Solution 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower and upper explosive (flammable) limits</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Easily soluble</td>
<td>Easily soluble</td>
<td>Easily soluble</td>
<td>Easily soluble</td>
<td>Easily soluble</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
<td>Not available</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>
<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>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Date of issue: 11/07/2018
Section 10. Stability and reactivity

10.1 Reactivity
- DNA Extraction RNase: No specific test data related to reactivity available for this product or its ingredients.
- DNA Extraction Pronase: No specific test data related to reactivity available for this product or its ingredients.
- DNA Extraction Solution 1: No specific test data related to reactivity available for this product or its ingredients.
- DNA Extraction Solution 2: No specific test data related to reactivity available for this product or its ingredients.
- DNA Extraction Solution 3: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
- DNA Extraction RNase: The product is stable.
- DNA Extraction Pronase: The product is stable.
- DNA Extraction Solution 1: The product is stable.
- DNA Extraction Solution 2: The product is stable.
- DNA Extraction Solution 3: The product is stable.

10.3 Possibility of hazardous reactions
- DNA Extraction RNase: Under normal conditions of storage and use, hazardous reactions will not occur.
- DNA Extraction Pronase: Under normal conditions of storage and use, hazardous reactions will not occur.
- DNA Extraction Solution 1: Under normal conditions of storage and use, hazardous reactions will not occur.
- DNA Extraction Solution 2: Under normal conditions of storage and use, hazardous reactions will not occur.
- DNA Extraction Solution 3: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid
- DNA Extraction RNase: No specific data.
- DNA Extraction Pronase: No specific data.
- DNA Extraction Solution 1: No specific data.
- DNA Extraction Solution 2: No specific data.
- DNA Extraction Solution 3: No specific data.

10.5 Incompatible materials
- DNA Extraction RNase: May react or be incompatible with oxidizing materials.
- DNA Extraction Pronase: May react or be incompatible with oxidizing materials.
- DNA Extraction Solution 1: May react or be incompatible with oxidizing materials.
- DNA Extraction Solution 2: May react or be incompatible with oxidizing materials.
- DNA Extraction Solution 3: May react or be incompatible with oxidizing materials.

10.6 Hazardous decomposition products
- DNA Extraction RNase: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- DNA Extraction Pronase: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- DNA Extraction Solution 1: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- DNA Extraction Solution 2: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- DNA Extraction Solution 3: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
## Section 10. Stability and reactivity

DNA Extraction Solution 3 produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

<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>DNA Extraction Pronase</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3290 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Proteinase, Streptomyces griseus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>1288 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Sodium dodecyl sulphate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>3000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td></td>
<td></td>
<td></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>DNA Extraction Solution 1</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 10 microliters</td>
<td>-</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td></td>
<td></td>
<td></td>
<td>24 hours 500 microliters</td>
<td>-</td>
</tr>
<tr>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>250 Micrograms</td>
<td>-</td>
</tr>
<tr>
<td>Sodium dodecyl sulphate</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td>10 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Skin - Mild irritant</td>
<td>Guinea pig</td>
<td>-</td>
<td></td>
<td>24 hours 25 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 25 milligrams</td>
<td>-</td>
</tr>
<tr>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td></td>
<td>24 hours 50 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Sensitization

Not available.

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Mutagenicity
Conclusion/Summary: Not available.

Carcinogenicity
Conclusion/Summary: Not available.

Reproductive toxicity
Conclusion/Summary: Not available.

Teratogenicity
Conclusion/Summary: Not available.

Specific target organ toxicity (single exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Proteinase, Streptomyces griseus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation</td>
</tr>
<tr>
<td>Sodium dodecyl sulphate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure

| DNA Extraction RNase | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| DNA Extraction Pronase | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| DNA Extraction Solution 1 | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| DNA Extraction Solution 2 | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| DNA Extraction Solution 3 | Routes of entry anticipated: Oral, Dermal, Inhalation. |

Potential acute health effects

Eye contact

| DNA Extraction RNase | No known significant effects or critical hazards. |
| DNA Extraction Pronase | Causes serious eye irritation. |
| DNA Extraction Solution 1 | Causes serious eye damage. |
| DNA Extraction Solution 2 | No known significant effects or critical hazards. |
| DNA Extraction Solution 3 | Causes serious eye irritation. |

Inhalation

| DNA Extraction RNase | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| DNA Extraction Pronase | May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| DNA Extraction Solution 1 | No known significant effects or critical hazards. |
| DNA Extraction Solution 2 | No known significant effects or critical hazards. |
| DNA Extraction Solution 3 | No known significant effects or critical hazards. |

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### Skin contact
- **DNA Extraction RNase**: No known significant effects or critical hazards.
- **DNA Extraction Pronase**: Causes skin irritation.
- **DNA Extraction Solution 1**: No known significant effects or critical hazards.
- **DNA Extraction Solution 2**: No known significant effects or critical hazards.
- **DNA Extraction Solution 3**: No known significant effects or critical hazards.

### Ingestion
- **DNA Extraction RNase**: No known significant effects or critical hazards.
- **DNA Extraction Pronase**: Causes skin irritation.
- **DNA Extraction Solution 1**: No known significant effects or critical hazards.
- **DNA Extraction Solution 2**: No known significant effects or critical hazards.
- **DNA Extraction Solution 3**: No known significant effects or critical hazards.

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

#### Eye contact
- **DNA Extraction RNase**: No specific data.
- **DNA Extraction Pronase**: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- **DNA Extraction Solution 1**: Adverse symptoms may include the following:
  - pain
  - watering
  - redness
- **DNA Extraction Solution 2**: No specific data.
- **DNA Extraction Solution 3**: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness

#### Inhalation
- **DNA Extraction RNase**: Adverse symptoms may include the following:
  - wheezing and breathing difficulties
  - asthma
- **DNA Extraction Pronase**: Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - wheezing and breathing difficulties
  - asthma
- **DNA Extraction Solution 1**: No specific data.
- **DNA Extraction Solution 2**: No specific data.
- **DNA Extraction Solution 3**: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness

#### Skin contact
- **DNA Extraction RNase**: No specific data.
- **DNA Extraction Pronase**: Adverse symptoms may include the following:
  - irritation
  - redness
- **DNA Extraction Solution 1**: Adverse symptoms may include the following:
  - pain or irritation
  - redness
  - blistering may occur
- **DNA Extraction Solution 2**: No specific data.
- **DNA Extraction Solution 3**: No specific data.

#### Ingestion
- **DNA Extraction RNase**: No specific data.
- **DNA Extraction Pronase**: No specific data.
- **DNA Extraction Solution 1**: Adverse symptoms may include the following:
  - stomach pains
- **DNA Extraction Solution 2**: No specific data.
- **DNA Extraction Solution 3**: No specific data.

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

#### Short term exposure

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Potential immediate effects:
- Not available.

Potential delayed effects:
- Not available.

Long term exposure:
- Not available.

Potential immediate effects:
- Not available.

Potential delayed effects:
- Not available.

Potential chronic health effects:

**General**:
- DNA Extraction RNase:
  - Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- DNA Extraction Pronase:
  - Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- DNA Extraction Solution 1:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 2:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 3:
  - No known significant effects or critical hazards.

**Carcinogenicity**:
- DNA Extraction RNase:
  - No known significant effects or critical hazards.
- DNA Extraction Pronase:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 1:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 2:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 3:
  - No known significant effects or critical hazards.

**Mutagenicity**:
- DNA Extraction RNase:
  - No known significant effects or critical hazards.
- DNA Extraction Pronase:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 1:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 2:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 3:
  - No known significant effects or critical hazards.

**Teratogenicity**:
- DNA Extraction RNase:
  - No known significant effects or critical hazards.
- DNA Extraction Pronase:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 1:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 2:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 3:
  - No known significant effects or critical hazards.

**Developmental effects**:
- DNA Extraction RNase:
  - No known significant effects or critical hazards.
- DNA Extraction Pronase:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 1:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 2:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 3:
  - No known significant effects or critical hazards.

**Fertility effects**:
- DNA Extraction RNase:
  - No known significant effects or critical hazards.
- DNA Extraction Pronase:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 1:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 2:
  - No known significant effects or critical hazards.
- DNA Extraction Solution 3:
  - 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>DNA Extraction Pronase</td>
<td>14622.2 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>60000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>64400 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Inhalation (dusts and mists)</th>
<th>DNA Extraction Solution 3</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75 mg/l</td>
<td>8571.4 mg/kg</td>
</tr>
</tbody>
</table>

## 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>DNA Extraction Solution 1</td>
<td>Polyoxymethylene octyl phenyl ether</td>
<td>Acute LC50 5.85 mg/l Fresh water</td>
<td>Crustaceans - Ceriodaphnia rigaudi - Neonate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 11.2 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 4500 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>Sodium dodecyl sulphate</td>
<td>Acute EC50 1200 µg/l Marine water</td>
<td>Algae - Skeletonema costatum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 900 µg/l Marine water</td>
<td>Crustaceans - Artemia salina - Adult</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 1400 µg/l Fresh water</td>
<td>Daphnia - Daphnia pulex - Neonate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 590 µg/l Fresh water</td>
<td>Fish - Cirrhinus mrigala - Larvae</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC 1.25 mg/l Marine water</td>
<td>Algae - Ulva fasciata - Zoea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC 1 mg/l Fresh water</td>
<td>Crustaceans - Pseudosida ramosa - Neonate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC 3.2 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC &gt;1357 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td>Sodium chloride</td>
<td>Acute EC50 4.74 g/L Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute EC50 519.6 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute EC50 402600 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 6.87 g/L Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute LC50 1000000 µg/l Fresh water</td>
<td>Fish - Morone saxatilis - Larvae</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic LC10 781 mg/l Fresh water</td>
<td>Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC 6 g/L Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC 0.314 g/L Fresh water</td>
<td>Daphnia - Daphnia pulex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chronic NOEC 100 mg/l Fresh water</td>
<td>Fish - Gambusia holbrooki - Adult</td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction Solution 1</td>
<td>Polyoxymethylene octyl phenyl ether</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### 12.3 Bioaccumulative potential

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**Section 12. Ecological information**

<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>DNA Extraction Solution 1</td>
<td>4.86</td>
<td>-</td>
<td>high</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>-2.03</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Sodium dodecyl sulphate</td>
<td></td>
<td></td>
<td></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.

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.

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## Section 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**U.S. Federal regulations**

- **Clean Water Act (CWA) 311**: Edetic acid; Sodium hydroxide
- **Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)**: Not listed
- **Clean Air Act Section 602 Class I Substances**: Not listed
- **Clean Air Act Section 602 Class II Substances**: Not listed
- **DEA List I Chemicals (Precursor Chemicals)**: Not listed
- **DEA List II Chemicals (Essential Chemicals)**: Not listed
- **TSCA 8(a) PAIR**: Polyoxyethylene octyl phenyl ether
- **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
- **SARA 302 TPQ**: DNA Extraction RNase
- **SARA 304 RQ**: DNA Extraction RNase, DNA Extraction Pronase
- **SARA 311/312**: DNA Extraction RNase, DNA Extraction Pronase

### Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>EHS</th>
<th>SARA 302 TPQ</th>
<th>SARA 304 RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>%</td>
<td></td>
<td>(lbs)</td>
<td>(gallons)</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td></td>
<td></td>
<td>(lbs)</td>
<td>(gallons)</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>&lt;0.1</td>
<td>Yes.</td>
<td>500</td>
<td>-</td>
</tr>
<tr>
<td>DNA Extraction RNase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SARA 304 RQ**: 8333333.3 lbs / 3783333.3 kg

**SARA 311/312**

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td>≤3</td>
<td>COMBUSTIBLE DUSTS RESPIRATORY SENSITIZATION - Category 1</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td>≥10 - ≤25</td>
<td>COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A RESPIRATORY SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td>≥25 - ≤50</td>
<td>COMBUSTIBLE DUSTS ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td>≤5</td>
<td>COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td></td>
<td>COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A</td>
</tr>
</tbody>
</table>

**Composition/information on ingredients**

### DNA Extraction RNase

- Nuclease, ribo-

### DNA Extraction Pronase

- Proteinase, Streptomyces griseus

### DNA Extraction Solution 1

- Sucrose
- Polyoxyethylene octyl phenyl ether

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Section 15. Regulatory information

<table>
<thead>
<tr>
<th>DNA Extraction Solution 2</th>
<th>Sodium dodecyl sulphate</th>
<th>&lt;2.5</th>
<th>FLAMMABLE SOLIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction Solution 3</td>
<td>Sodium chloride</td>
<td>≥25 - ≤50</td>
<td>EYE IRRITATION - Category 2A</td>
</tr>
</tbody>
</table>

**State regulations**

**Massachusetts**: The following components are listed: SUCROSE DUST

**New York**: None of the components are listed.

**New Jersey**: None of the components are listed.

**Pennsylvania**: The following components are listed: .ALPHA.-D-GLUCOPYRANOSIDE, .BETA.-D-FRUCTOFURANOSYL

**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**: Not determined.

**Canada**: Not determined.

**China**: All components are listed or exempted.

**Europe**: All components are listed or exempted.


**Malaysia**: Not determined.

**New Zealand**: All components are listed or exempted.

**Philippines**: Not determined.

**Republic of Korea**: Not determined.

**Taiwan**: All components are listed or exempted.

**Thailand**: Not determined.

**Turkey**: Not determined.

**United States**: All components are listed or exempted.

**Viet Nam**: Not determined.
Section 16. Other information

History

Date of issue : 11/07/2018
Date of previous issue : 09/30/2016
Version : 5

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA Extraction RNase</td>
<td></td>
</tr>
<tr>
<td>RESPIRATORY SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>DNA Extraction Pronase</td>
<td></td>
</tr>
<tr>
<td>SKIN IRRITATION - Category 2</td>
<td>Calculation method</td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>RESPIRATORY SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>DNA Extraction Solution 1</td>
<td></td>
</tr>
<tr>
<td>SERIOUS EYE DAMAGE - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (ACUTE) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>DNA Extraction Solution 2</td>
<td></td>
</tr>
<tr>
<td>AQUATIC HAZARD (ACUTE) - Category 3</td>
<td>Calculation method</td>
</tr>
<tr>
<td>DNA Extraction Solution 3</td>
<td></td>
</tr>
<tr>
<td>EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

 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.