

SAFETY DATA SHEET

Absolutely RNA FFPE Kit, Part Number 400809

Section 1. Identification

1.1 Product identifier

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|--------------------------------|--|-----------|
| Product name | : Absolutely RNA FFPE Kit, Part Number 400809 | |
| Part No. (Chemical Kit) | : 400809 | |
| Part No. | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) | 400711-23 |
| | : β -Mercaptoethanol | 200345-21 |
| | : De-paraffinization Reagent d-limonene | 400809-15 |
| | : RNA Binding Buffer | 400809-13 |
| | : 1.67X High Salt Wash Buffer | 400711-14 |
| | : 5x Low Salt Wash Buffer | 400711-15 |
| | : Elution Buffer | 400752-16 |
| | : DNase Reconstitution Buffer | 400711-17 |
| | : DNase Digestion Buffer | 400711-18 |
| | : Proteinase K | 400809-17 |
| | : Proteinase K Digestion Buffer | 400809-18 |
| | : QPCR Human Reference Total RNA | 750500-41 |

Validation date : 1/23/2018

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

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| Material uses | : Analytical reagent. | | |
| | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) | 2600 U | |
| | : β -Mercaptoethanol | 0.75 ml (750 μ l | 14.33 M) |
| | : De-paraffinization Reagent d-limonene | 150 ml | |
| | : RNA Binding Buffer | 35 ml | |
| | : 1.67X High Salt Wash Buffer | 24 ml | |
| | : 5x Low Salt Wash Buffer | 17 ml | |
| | : Elution Buffer | 3 ml | |
| | : DNase Reconstitution Buffer | 0.3 ml | |
| | : DNase Digestion Buffer | 1.5 ml | |
| | : Proteinase K | 0.5 ml | |
| | : Proteinase K Digestion Buffer | 5 ml | |
| | : QPCR Human Reference Total RNA | 0.025 ml (25 μ g | 1 μ g/ μ l) |

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

Section 2. Hazards identification

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| OSHA/HCS status | : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). 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. 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. This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). 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. 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. 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. |
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Classification of the substance or mixture

RNase-Free DNase I (Lyophilized)
Comb. Dusts

COMBUSTIBLE DUSTS

β-Mercaptoethanol

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| H227 | FLAMMABLE LIQUIDS - Category 4 |
| H301 | ACUTE TOXICITY (oral) - Category 3 |
| H310 | ACUTE TOXICITY (dermal) - Category 2 |
| H330 | ACUTE TOXICITY (inhalation) - Category 2 |
| H315 | SKIN IRRITATION - Category 2 |
| H318 | SERIOUS EYE DAMAGE - Category 1 |
| H317 | SKIN SENSITIZATION - Category 1 |
| H335 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |

De-paraffinization Reagent d-limonene

Section 2. Hazards identification

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| H226 | FLAMMABLE LIQUIDS - Category 3 |
| H315 | SKIN IRRITATION - Category 2 |
| H319 | EYE IRRITATION - Category 2A |
| H317 | SKIN SENSITIZATION - Category 1 |
| H335 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |

RNA Binding Buffer

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| H302 | ACUTE TOXICITY (oral) - Category 4 |
| H332 | ACUTE TOXICITY (inhalation) - Category 4 |

1.67X High Salt Wash Buffer

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| H302 | ACUTE TOXICITY (oral) - Category 4 |
| H332 | ACUTE TOXICITY (inhalation) - Category 4 |

DNase Reconstitution Buffer

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|------|------------------------------|
| H320 | EYE IRRITATION - Category 2B |
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DNase Digestion Buffer

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|------|--|
| H226 | FLAMMABLE LIQUIDS - Category 3 |
| H319 | EYE IRRITATION - Category 2A |
| H335 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| H336 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 |
| H373 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2 |

Proteinase K

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| H320 | EYE IRRITATION - Category 2B |
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Ingredients of unknown toxicity

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|-------------------------------|--|
| 1.67X High Salt Wash Buffer | Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10% |
| DNase Reconstitution Buffer | Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60% |
| DNase Digestion Buffer | Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10% |
| Proteinase K | Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30% |
| Proteinase K Digestion Buffer | 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% |

2.2 GHS label elements

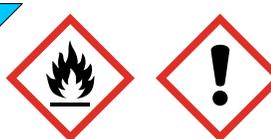
Section 2. Hazards identification

Hazard pictograms

: -Mercaptoethanol



De-paraffinization Reagent d-limonene



RNA Binding Buffer



1.67X High Salt Wash Buffer



DNase Digestion Buffer



Signal word

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|---|-----------------|
| :  Nase-Free DNase I (Lyophilized) | Warning |
| β -Mercaptoethanol | Danger |
| De-paraffinization Reagent d-limonene | Warning |
| RNA Binding Buffer | Warning |
| 1.67X High Salt Wash Buffer | Warning |
| 5x Low Salt Wash Buffer | No signal word. |
| Elution Buffer | No signal word. |
| DNase Reconstitution Buffer | Warning |
| DNase Digestion Buffer | Warning |
| Proteinase K | Warning |
| Proteinase K Digestion Buffer | No signal word. |
| QPCR Human Reference Total RNA | No signal word. |

Hazard statements

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| :  Nase-Free DNase I (Lyophilized) | No Code(s) - May form combustible dust concentrations in air. |
| β -Mercaptoethanol | H227 - Combustible liquid. H310 + H330 - Fatal in contact with skin or if inhaled. H301 - Toxic if swallowed. H318 - Causes serious eye damage. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation. |
| De-paraffinization Reagent d-limonene | H226 - Flammable liquid and vapor. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation. |
| RNA Binding Buffer | H302 + H332 - Harmful if swallowed or if inhaled. |
| 1.67X High Salt Wash Buffer | H302 + H332 - Harmful if swallowed or if inhaled. |
| 5x Low Salt Wash Buffer | No known significant effects or critical hazards. |

Section 2. Hazards identification

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| <p>Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer</p> | <p>No known significant effects or critical hazards. H320 - Causes eye irritation. H226 - Flammable liquid and vapor. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. (liver) H320 - Causes eye irritation.</p> |
| <p>Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA</p> | <p>No known significant effects or critical hazards. No known significant effects or critical hazards.</p> |

Precautionary statements

Prevention

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| <p>β-Nase-Free DNase I (Lyophilized) β-Mercaptoethanol</p> | <p>Not applicable. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P284 - Wear respiratory protection. P210 - Keep away from flames and hot surfaces. - No smoking. P271 - Use only outdoors or in a well-ventilated area. P262 - Do not get in eyes, on skin, or on clothing. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling. P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.</p> |
| <p>De-paraffinization Reagent d-limonene</p> | <p>P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P264 - Wash hands thoroughly after handling. P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.</p> |
| <p>RNA Binding Buffer</p> | <p>P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.</p> |
| <p>1.67X High Salt Wash Buffer</p> | <p>P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P270 - Do not eat, drink or smoke when using this product.</p> |
| <p>5x Low Salt Wash Buffer</p> | <p>P264 - Wash hands thoroughly after handling. Not applicable.</p> |

Section 2. Hazards identification

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| | <p>Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer</p> | <p>Not applicable. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling. P264 - Wash hands thoroughly after handling.</p> |
| <p>Response</p> | <p>Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA</p> <p>: RNase-Free DNase I (Lyophilized) β-Mercaptoethanol</p> | <p>Not applicable. P264 - Wash hands thoroughly after handling. P264 - Wash hands thoroughly after handling. Not applicable. Not applicable.</p> <p>Not applicable. P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. P302 + P361+P364 + P352 + P310 + P363 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Immediately call a POISON CENTER or physician. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. 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 physician.</p> |
| | <p>De-paraffinization Reagent d-limonene</p> | <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> |

Section 2. Hazards identification

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| RNA Binding Buffer | <p>P337 + P313 - If eye irritation persists: Get medical attention.</p> <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</p> <p>P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.</p> |
| 1.67X High Salt Wash Buffer | <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</p> <p>P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.</p> |
| 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer | <p>Not applicable.</p> <p>Not applicable.</p> <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical attention.</p> |
| DNase Digestion Buffer | <p>P314 - Get medical attention if you feel unwell.</p> <p>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</p> <p>P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical attention.</p> |
| Proteinase K | <p>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 - If eye irritation persists: Get medical attention.</p> |
| Proteinase K Digestion Buffer QPCR Human Reference Total RNA | <p>Not applicable.</p> <p>Not applicable.</p> |
| : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol | <p>Not applicable.</p> <p>P405 - Store locked up.</p> <p>P403 - Store in a well-ventilated place.</p> <p>P235 - Keep cool.</p> |
| De-paraffinization Reagent d- limonene | <p>P405 - Store locked up.</p> <p>P403 - Store in a well-ventilated place.</p> <p>P235 - Keep cool.</p> |
| RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer | <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> <p>Not applicable.</p> |

Storage

Section 2. Hazards identification

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| | DNase Reconstitution Buffer | Not applicable. |
| | DNase Digestion Buffer | P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool. |
| | Proteinase K | Not applicable. |
| | Proteinase K Digestion Buffer | Not applicable. |
| | QPCR Human Reference Total RNA | Not applicable. |
| Disposal | : RNase-Free DNase I (Lyophilized) | Not applicable. |
| | β-Mercaptoethanol | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | De-paraffinization Reagent d-limonene | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | RNA Binding Buffer | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | 1.67X High Salt Wash Buffer | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | 5x Low Salt Wash Buffer | Not applicable. |
| | Elution Buffer | Not applicable. |
| | DNase Reconstitution Buffer | Not applicable. |
| | DNase Digestion Buffer | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | Proteinase K | Not applicable. |
| | Proteinase K Digestion Buffer | Not applicable. |
| | QPCR Human Reference Total RNA | Not applicable. |
| Supplemental label elements | : RNase-Free DNase I (Lyophilized) | Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation. |
| | β-Mercaptoethanol | None known. |
| | De-paraffinization Reagent d-limonene | None known. |
| | RNA Binding Buffer | None known. |
| | 1.67X High Salt Wash Buffer | None known. |
| | 5x Low Salt Wash Buffer | None known. |
| | Elution Buffer | None known. |
| | DNase Reconstitution Buffer | None known. |
| | DNase Digestion Buffer | None known. |
| | Proteinase K | None known. |
| | Proteinase K Digestion Buffer | None known. |
| | QPCR Human Reference Total RNA | None known. |
| 2.3 Other hazards | | |
| Hazards not otherwise classified | : RNase-Free DNase I (Lyophilized) | None known. |
| | β-Mercaptoethanol | None known. |
| | De-paraffinization Reagent d-limonene | None known. |
| | RNA Binding Buffer | None known. |
| | 1.67X High Salt Wash Buffer | None known. |
| | 5x Low Salt Wash Buffer | None known. |
| | Elution Buffer | None known. |

Section 2. Hazards identification

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| DNase Reconstitution Buffer | None known. |
| DNase Digestion Buffer | None known. |
| Proteinase K | None known. |
| Proteinase K Digestion Buffer | None known. |
| QPCR Human Reference Total RNA | None known. |

Section 3. Composition/information on ingredients

| | | | |
|--------------------------|---|---------------------------------------|-----------|
| Substance/mixture | : | RNase-Free DNase I (Lyophilized) | Substance |
| | | β-Mercaptoethanol | Substance |
| | | De-paraffinization Reagent d-limonene | Substance |
| | | RNA Binding Buffer | Mixture |
| | | 1.67X High Salt Wash Buffer | Mixture |
| | | 5x Low Salt Wash Buffer | Mixture |
| | | Elution Buffer | Mixture |
| | | DNase Reconstitution Buffer | Mixture |
| | | DNase Digestion Buffer | Mixture |
| | | Proteinase K | Mixture |
| | | Proteinase K Digestion Buffer | Mixture |
| | | QPCR Human Reference Total RNA | Mixture |

| Ingredient name | % | CAS number |
|--|-----------------------|-----------------------------------|
| RNase-Free DNase I (Lyophilized) Enzyme. | 100 | - |
| β-Mercaptoethanol 2-Mercaptoethanol | 100 | 60-24-2 |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | 100 | 5989-27-5 |
| RNA Binding Buffer Guanidinium thiocyanate | ≥25 - ≤50 | 593-84-0 |
| 1.67X High Salt Wash Buffer Guanidinium thiocyanate 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride | ≥25 - ≤50 ≤3 | 593-84-0 1185-53-1 |
| DNase Reconstitution Buffer Glycerol | ≥50 - ≤75 | 56-81-5 |
| DNase Digestion Buffer Ethanol 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride Sodium chloride | ≥25 - ≤50 ≤5 ≤3 | 64-17-5 1185-53-1 7647-14-5 |
| Proteinase K Glycerol | ≥25 - ≤50 | 56-81-5 |
| Proteinase K Digestion Buffer Sodium chloride Sodium dodecyl sulphate | ≤3 ≤2.5 | 7647-14-5 151-21-3 |

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

Section 3. Composition/information on ingredients

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

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| Eye contact | :  RNase-Free DNase I (Lyophilized) | 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. |
| | β -Mercaptoethanol | 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. |
| | De-paraffinization Reagent d-limonene | 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. |
| | RNA Binding Buffer | 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. |
| | 1.67X High Salt Wash Buffer | 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. |
| | 5x Low Salt Wash Buffer | 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. |
| | Elution Buffer | 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. |
| | DNase Reconstitution Buffer | 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. If irritation persists, get medical attention. |
| | DNase Digestion Buffer | 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. |
| | Proteinase K | 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. If irritation persists, get medical attention. |

Section 4. First aid measures

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| | Proteinase K Digestion Buffer | 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. |
| | QPCR Human Reference Total RNA | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| Inhalation | : RNase-Free DNase I (Lyophilized) | 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. |
| | β -Mercaptoethanol | 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. |
| | De-paraffinization Reagent d-limonene | 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. |
| | RNA Binding Buffer | 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 |

Section 4. First aid measures

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| | resuscitation. Get medical attention if adverse health effects persist or are severe. 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 be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| 1.67X High Salt Wash Buffer | 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 adverse health effects persist or are severe. 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 be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| 5x Low Salt Wash Buffer | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| Elution Buffer | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| DNase Reconstitution Buffer | 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. |
| DNase Digestion Buffer | 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 |

Section 4. First aid measures

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| | | medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| | Proteinase K | 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. |
| | Proteinase K Digestion Buffer | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | QPCR Human Reference Total RNA | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| Skin contact | : RNase-Free DNase I (Lyophilized) | 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. |
| | β -Mercaptoethanol | Get medical attention immediately. Call a poison center or physician. Gently wash with plenty of soap and 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. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | De-paraffinization Reagent d-limonene | Wash with plenty of soap and 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | RNA Binding Buffer | 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. |
| | 1.67X High Salt Wash Buffer | 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. |
| | 5x Low Salt Wash Buffer | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get |

Section 4. First aid measures

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| Elution Buffer | <p>medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</p> |
| DNase Reconstitution Buffer | <p>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.</p> |
| DNase Digestion Buffer | <p>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.</p> |
| Proteinase K | <p>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.</p> |
| Proteinase K Digestion Buffer | <p>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</p> |
| QPCR Human Reference Total RNA | <p>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</p> |
| Ingestion | <p>: RNase-Free DNase I (Lyophilized) 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.</p> |
| β-Mercaptoethanol | <p>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.</p> |

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De-paraffinization Reagent d-limonene

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.

RNA Binding Buffer

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

1.67X High Salt Wash Buffer

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

5x Low Salt Wash Buffer

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.

Elution Buffer

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

Section 4. First aid measures

DNase Reconstitution Buffer

quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Wash out mouth with water. Remove 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.

DNase Digestion Buffer

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

Proteinase K

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.

Proteinase K Digestion Buffer

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.

QPCR Human Reference Total

Wash out mouth with water. Remove victim to

Section 4. First aid measures

RNA

fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

- :  RNase-Free DNase I (Lyophilized) Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- β -Mercaptoethanol Causes serious eye damage.
- De-paraffinization Reagent d-limonene Causes serious eye irritation.
- RNA Binding Buffer No known significant effects or critical hazards.
- 1.67X High Salt Wash Buffer No known significant effects or critical hazards.
- 5x Low Salt Wash Buffer No known significant effects or critical hazards.
- Elution Buffer No known significant effects or critical hazards.
- DNase Reconstitution Buffer Causes eye irritation.
- DNase Digestion Buffer Causes serious eye irritation.
- Proteinase K Causes eye irritation.
- Proteinase K Digestion Buffer No known significant effects or critical hazards.
- QPCR Human Reference Total RNA No known significant effects or critical hazards.

Inhalation

- :  RNase-Free DNase I (Lyophilized) Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Fatal if inhaled. May cause respiratory irritation. May cause respiratory irritation.
- β -Mercaptoethanol Harmful if inhaled.
- De-paraffinization Reagent d-limonene Harmful if inhaled.
- RNA Binding Buffer No known significant effects or critical hazards.
- 1.67X High Salt Wash Buffer No known significant effects or critical hazards.
- 5x Low Salt Wash Buffer No known significant effects or critical hazards.
- Elution Buffer Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- DNase Reconstitution Buffer No known significant effects or critical hazards.
- DNase Digestion Buffer No known significant effects or critical hazards.
- Proteinase K No known significant effects or critical hazards.
- Proteinase K Digestion Buffer No known significant effects or critical hazards.
- QPCR Human Reference Total RNA No known significant effects or critical hazards.

Skin contact

- :  RNase-Free DNase I (Lyophilized) No known significant effects or critical hazards.
- β -Mercaptoethanol Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
- De-paraffinization Reagent d-limonene Causes skin irritation. May cause an allergic skin reaction.
- RNA Binding Buffer No known significant effects or critical hazards.
- 1.67X High Salt Wash Buffer No known significant effects or critical hazards.
- 5x Low Salt Wash Buffer No known significant effects or critical hazards.
- Elution Buffer No known significant effects or critical hazards.
- DNase Reconstitution Buffer No known significant effects or critical hazards.
- DNase Digestion Buffer No known significant effects or critical hazards.
- Proteinase K No known significant effects or critical hazards.
- Proteinase K Digestion Buffer No known significant effects or critical hazards.
- QPCR Human Reference Total RNA No known significant effects or critical hazards.

Section 4. First aid measures

Ingestion

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| RNA | |
| : RNase-Free DNase I (Lyophilized) | No known significant effects or critical hazards. |
| β-Mercaptoethanol | Toxic if swallowed. |
| De-paraffinization Reagent d-limonene | No known significant effects or critical hazards. |
| RNA Binding Buffer | Harmful if swallowed. |
| 1.67X High Salt Wash Buffer | Harmful if swallowed. |
| 5x Low Salt Wash Buffer | No known significant effects or critical hazards. |
| Elution Buffer | No known significant effects or critical hazards. |
| DNase Reconstitution Buffer | No known significant effects or critical hazards. |
| DNase Digestion Buffer | Can cause central nervous system (CNS) depression. |
| Proteinase K | No known significant effects or critical hazards. |
| Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| QPCR Human Reference Total RNA | No known significant effects or critical hazards. |

Over-exposure signs/symptoms

Eye contact

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| : RNase-Free DNase I (Lyophilized) | Adverse symptoms may include the following: irritation redness |
| β-Mercaptoethanol | Adverse symptoms may include the following: pain watering redness |
| De-paraffinization Reagent d-limonene | Adverse symptoms may include the following: pain or irritation watering redness |
| RNA Binding Buffer | No specific data. |
| 1.67X High Salt Wash Buffer | No specific data. |
| 5x Low Salt Wash Buffer | No specific data. |
| Elution Buffer | No specific data. |
| DNase Reconstitution Buffer | Adverse symptoms may include the following: irritation watering redness |
| DNase Digestion Buffer | Adverse symptoms may include the following: pain or irritation watering redness |
| Proteinase K | Adverse symptoms may include the following: irritation watering redness |
| Proteinase K Digestion Buffer | No specific data. |
| QPCR Human Reference Total RNA | No specific data. |

Inhalation

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| : RNase-Free DNase I (Lyophilized) | Adverse symptoms may include the following: respiratory tract irritation coughing |
| β-Mercaptoethanol | Adverse symptoms may include the following: respiratory tract irritation coughing |
| De-paraffinization Reagent d-limonene | Adverse symptoms may include the following: respiratory tract irritation coughing |

Section 4. First aid measures

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| | RNA Binding Buffer | No specific data. |
| | 1.67X High Salt Wash Buffer | No specific data. |
| | 5x Low Salt Wash Buffer | No specific data. |
| | Elution Buffer | No specific data. |
| | DNase Reconstitution Buffer | No specific data. |
| | DNase Digestion Buffer | Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| | Proteinase K | No specific data. |
| | Proteinase K Digestion Buffer | No specific data. |
| | QPCR Human Reference Total RNA | No specific data. |
| Skin contact | : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol | No specific data. Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| | De-paraffinization Reagent d-limonene | Adverse symptoms may include the following: irritation redness |
| | RNA Binding Buffer | No specific data. |
| | 1.67X High Salt Wash Buffer | No specific data. |
| | 5x Low Salt Wash Buffer | No specific data. |
| | Elution Buffer | No specific data. |
| | DNase Reconstitution Buffer | No specific data. |
| | DNase Digestion Buffer | No specific data. |
| | Proteinase K | No specific data. |
| | Proteinase K Digestion Buffer | No specific data. |
| | QPCR Human Reference Total RNA | No specific data. |
| Ingestion | : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol | No specific data. Adverse symptoms may include the following: stomach pains |
| | De-paraffinization Reagent d-limonene | No specific data. |
| | RNA Binding Buffer | No specific data. |
| | 1.67X High Salt Wash Buffer | No specific data. |
| | 5x Low Salt Wash Buffer | No specific data. |
| | Elution Buffer | No specific data. |
| | DNase Reconstitution Buffer | No specific data. |
| | DNase Digestion Buffer | No specific data. |
| | Proteinase K | No specific data. |
| | Proteinase K Digestion Buffer | No specific data. |
| | QPCR Human Reference Total RNA | No specific data. |

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

Section 4. First aid measures

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| Notes to physician | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | β -Mercaptoethanol | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | De-paraffinization Reagent d-limonene | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | RNA Binding Buffer | 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. |
| | 1.67X High Salt Wash Buffer | 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. |
| | 5x Low Salt Wash Buffer | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | Elution Buffer | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | DNase Reconstitution Buffer | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | DNase Digestion Buffer | 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. |
| | Proteinase K | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | Proteinase K Digestion Buffer | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | QPCR Human Reference Total RNA | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) | No specific treatment. |
| | β -Mercaptoethanol | No specific treatment. |
| | De-paraffinization Reagent d-limonene | No specific treatment. |
| | RNA Binding Buffer | No specific treatment. |
| | 1.67X High Salt Wash Buffer | No specific treatment. |
| | 5x Low Salt Wash Buffer | No specific treatment. |
| | Elution Buffer | No specific treatment. |
| | DNase Reconstitution Buffer | No specific treatment. |
| | DNase Digestion Buffer | No specific treatment. |
| | Proteinase K | No specific treatment. |
| | Proteinase K Digestion Buffer | No specific treatment. |
| | QPCR Human Reference Total RNA | No specific treatment. |

Section 4. First aid measures

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| Protection of first-aiders | : RNase-Free DNase I (Lyophilized) | 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. |
| | β-Mercaptoethanol | 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. |
| | De-paraffinization Reagent d-limonene | 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. |
| | RNA Binding Buffer | 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. |
| | 1.67X High Salt Wash Buffer | 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. |
| | 5x Low Salt Wash Buffer | No action shall be taken involving any personal risk or without suitable training. |
| | Elution Buffer | No action shall be taken involving any personal risk or without suitable training. |
| | DNase Reconstitution Buffer | 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. |
| | DNase Digestion Buffer | 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. |
| | Proteinase K | 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. |
| | Proteinase K Digestion Buffer | No action shall be taken involving any personal risk or without suitable training. |
| | QPCR Human Reference Total RNA | No action shall be taken involving any personal risk or without suitable training. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

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| Suitable extinguishing media | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | Use dry chemical powder. Use dry chemical, CO ₂ , water spray (fog) or foam. Use dry chemical, CO ₂ , water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture. Do not use water jet. Do not use water jet. None known. None known. None known. None known. None known. None known. Do not use water jet. None known. None known. None known. |

5.2 Special hazards arising from the substance or mixture

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| Specific hazards arising from the chemical | : <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer | May form explosible dust-air mixture if dispersed. Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. In a fire or if heated, a pressure increase will occur and the container may burst. |
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Section 5. Fire-fighting measures

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| | 1.67X High Salt Wash Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | 5x Low Salt Wash Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Elution Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | DNase Reconstitution Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | DNase Digestion Buffer | Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. |
| | Proteinase K | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Proteinase K Digestion Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | QPCR Human Reference Total RNA | In a fire or if heated, a pressure increase will occur and the container may burst. |
| Hazardous thermal decomposition products | : RNase-Free DNase I (Lyophilized) | Decomposition products may include the following materials: carbon dioxide carbon monoxide |
| | β-Mercaptoethanol | Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides |
| | De-paraffinization Reagent d-limonene | Decomposition products may include the following materials: carbon dioxide carbon monoxide |
| | RNA Binding Buffer | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides |
| | 1.67X High Salt Wash Buffer | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds |
| | 5x Low Salt Wash Buffer | No specific data. |
| | Elution Buffer | No specific data. |
| | DNase Reconstitution Buffer | Decomposition products may include the following materials: carbon dioxide carbon monoxide |
| | DNase Digestion Buffer | Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides |
| | Proteinase K | Decomposition products may include the following |

Section 5. Fire-fighting measures

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| Proteinase K Digestion Buffer | materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides halogenated compounds metal oxide/oxides |
| QPCR Human Reference Total RNA | No specific data. |

5.3 Advice for firefighters

Special protective actions for fire-fighters

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|---------------------------------------|--|
| : RNase-Free DNase I (Lyophilized) | 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| β-Mercaptoethanol | 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| De-paraffinization Reagent d-limonene | 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |
| RNA Binding Buffer | 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. |
| 1.67X High Salt Wash Buffer | 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. |
| 5x Low Salt Wash Buffer | 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. |
| Elution Buffer | 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. |
| DNase Reconstitution Buffer | 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. |
| DNase Digestion Buffer | 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

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|---------------------------------------|---|
| Proteinase K | 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. |
| Proteinase K Digestion Buffer | 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. |
| QPCR Human Reference Total RNA | 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. |
| : RNase-Free DNase I (Lyophilized) | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| β-Mercaptoethanol | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| De-paraffinization Reagent d-limonene | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| RNA Binding Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| 1.67X High Salt Wash Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| 5x Low Salt Wash Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Elution Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| DNase Reconstitution Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| DNase Digestion Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Proteinase K | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Proteinase K Digestion Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| QPCR Human Reference Total RNA | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive |

Section 5. Fire-fighting measures

pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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| <p>For non-emergency personnel</p> | <p>: <input checked="" type="checkbox"/> RNase-Free DNase I (Lyophilized)</p> | <p>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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</p> |
| <p>β-Mercaptoethanol</p> | <p></p> | <p>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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</p> |
| <p>De-paraffinization Reagent d-limonene</p> | <p></p> | <p>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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</p> |
| <p>RNA Binding Buffer</p> | <p></p> | <p>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.</p> |
| <p>1.67X High Salt Wash Buffer</p> | <p></p> | <p>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.</p> |
| <p>5x Low Salt Wash Buffer</p> | <p></p> | <p>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.</p> |

Section 6. Accidental release measures

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| Elution Buffer | 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. |
| DNase Reconstitution Buffer | 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. |
| DNase Digestion Buffer | 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| Proteinase K | 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. |
| Proteinase K Digestion Buffer | 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. |
| QPCR Human Reference Total RNA | 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. |
| For emergency responders : RNase-Free DNase I (Lyophilized) | 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". |
| β-Mercaptoethanol | 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". |
| De-paraffinization Reagent d-limonene | 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". |
| RNA Binding Buffer | If specialized clothing is required to deal with the |

Section 6. Accidental release measures

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| | <p>1.67X High Salt Wash Buffer</p> <p>5x Low Salt Wash Buffer</p> <p>Elution Buffer</p> <p>DNase Reconstitution Buffer</p> <p>DNase Digestion Buffer</p> <p>Proteinase K</p> <p>Proteinase K Digestion Buffer</p> <p>QPCR Human Reference Total RNA</p> | <p>spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>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".</p> <p>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".</p> <p>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".</p> <p>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".</p> <p>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".</p> <p>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".</p> <p>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".</p> |
| <p>6.2 Environmental precautions</p> | <p>: RNase-Free DNase I (Lyophilized)</p> <p>β-Mercaptoethanol</p> <p>De-paraffinization Reagent d-limonene</p> <p>RNA Binding Buffer</p> | <p>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).</p> <p>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).</p> <p>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.</p> <p>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).</p> |

Section 6. Accidental release measures

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| 1.67X High Salt Wash Buffer | 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). |
| 5x Low Salt Wash Buffer | 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). |
| Elution Buffer | 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). |
| DNase Reconstitution Buffer | 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). |
| DNase Digestion Buffer | 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). |
| Proteinase K | 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). |
| Proteinase K Digestion Buffer | 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). |
| QPCR Human Reference Total RNA | 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

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| Methods for cleaning up | : RNase-Free DNase I (Lyophilized) | Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. |
| | β-Mercaptoethanol | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. |
| | De-paraffinization Reagent d-limonene | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb |

Section 6. Accidental release measures

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| RNA Binding Buffer | with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| 1.67X High Salt Wash Buffer | 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. |
| 5x Low Salt Wash Buffer | 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. |
| Elution Buffer | 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. |
| DNase Reconstitution Buffer | 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. |
| DNase Digestion Buffer | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. |
| Proteinase K | 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. |
| Proteinase K Digestion Buffer | 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. |
| QPCR Human Reference Total RNA | 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

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| <p>Protective measures</p> | <p>: RNase-Free DNase I (Lyophilized)</p> | <p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. 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. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> |
| | <p>β-Mercaptoethanol</p> | <p>Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems 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 breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> |
| | <p>De-paraffinization Reagent d-limonene</p> | <p>Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems 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. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be</p> |

Section 7. Handling and storage

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| RNA Binding Buffer | <p>hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. 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.</p> |
| 1.67X High Salt Wash Buffer | <p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. 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.</p> |
| 5x Low Salt Wash Buffer | <p>Put on appropriate personal protective equipment (see Section 8).</p> |
| Elution Buffer | <p>Put on appropriate personal protective equipment (see Section 8).</p> |
| DNase Reconstitution Buffer | <p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> |
| DNase Digestion Buffer | <p>Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> |
| Proteinase K | <p>Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.</p> |
| Proteinase K Digestion Buffer | <p>Put on appropriate personal protective equipment</p> |

Section 7. Handling and storage

Advice on general occupational hygiene

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| <p>QPCR Human Reference Total RNA</p> | <p>(see Section 8). Put on appropriate personal protective equipment (see Section 8).</p> |
| <p>: RNase-Free DNase I (Lyophilized)</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>β-Mercaptoethanol</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>De-paraffinization Reagent d-limonene</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>RNA Binding Buffer</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>1.67X High Salt Wash Buffer</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>5x Low Salt Wash Buffer</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>Elution Buffer</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>DNase Reconstitution Buffer</p> | <p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |

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| DNase Digestion Buffer | 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. |
| Proteinase K | 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. |
| Proteinase K Digestion Buffer | 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. |
| QPCR Human Reference Total RNA | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

7.2 Conditions for safe storage, including any incompatibilities

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| : RNase-Free DNase I (Lyophilized) | Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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. |
| β-Mercaptoethanol | Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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. |
| De-paraffinization Reagent d- | Store in accordance with local regulations. Store in |

Section 7. Handling and storage

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| limonene | a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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. |
| RNA Binding Buffer | 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. |
| 1.67X High Salt Wash Buffer | 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. |
| 5x Low Salt Wash Buffer | 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. |
| Elution Buffer | 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. |
| DNase Reconstitution Buffer | Store in accordance with local regulations. Store in original container protected from direct sunlight in a |

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DNase Digestion Buffer

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 a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

Proteinase K

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.

Proteinase K Digestion Buffer

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.

QPCR Human Reference Total RNA

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\(s\)](#)

Section 7. Handling and storage

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| Recommendations | : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | Industrial applications, Professional applications. Industrial applications, Professional applications. |
| Industrial sector specific solutions | : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | Not applicable. Not applicable. |

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|--|---|
| RNase-Free DNase I (Lyophilized) Enzyme. | None. |
| β-Mercaptoethanol 2-Mercaptoethanol | AIHA WEEL (United States, 10/2011). Absorbed through skin. TWA: 0.2 ppm 8 hours. |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | None. |
| RNA Binding Buffer Guanidinium thiocyanate | None. |
| 1.67X High Salt Wash Buffer Guanidinium thiocyanate 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride | None. None. |
| DNase Reconstitution Buffer Glycerol | OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust |

Section 8. Exposure controls/personal protection

| | |
|---|---|
| <p>DNase Digestion Buffer Ethanol</p> | <p>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p> <p>ACGIH TLV (United States, 3/2017). STEL: 1000 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2016). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2016). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p> |
| <p>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride Sodium chloride</p> | <p>None. None.</p> |
| <p>Proteinase K Glycerol</p> | <p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust</p> <p>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p> |
| <p>Proteinase K Digestion Buffer Sodium chloride Sodium dodecyl sulphate</p> | <p>None. None.</p> |

8.2 Exposure controls

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- 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**
- | | |
|---------------------------------------|------------------------|
| β-Nase-Free DNase I (Lyophilized) | Solid. [lyophilized] |
| β-Mercaptoethanol | Liquid. |
| De-paraffinization Reagent d-limonene | Liquid. [Oily liquid.] |
| RNA Binding Buffer | Liquid. |
| 1.67X High Salt Wash Buffer | Liquid. |
| 5x Low Salt Wash Buffer | Liquid. |
| Elution Buffer | Liquid. |
| DNase Reconstitution Buffer | Liquid. |
| DNase Digestion Buffer | Liquid. |
| Proteinase K | Liquid. |
| Proteinase K Digestion Buffer | Liquid. |
| QPCR Human Reference Total RNA | Liquid. |
- Color**
- | | |
|---------------------------------------|---------------------|
| β-Nase-Free DNase I (Lyophilized) | Not available. |
| β-Mercaptoethanol | Colorless. |
| De-paraffinization Reagent d-limonene | White to yellowish. |
| RNA Binding Buffer | Not available. |
| 1.67X High Salt Wash Buffer | Not available. |
| 5x Low Salt Wash Buffer | Not available. |
| Elution Buffer | Not available. |
| DNase Reconstitution Buffer | Not available. |
| DNase Digestion Buffer | Not available. |
| Proteinase K | Not available. |
| Proteinase K Digestion Buffer | Not available. |
| QPCR Human Reference Total | Not available. |

Section 9. Physical and chemical properties

| | | |
|-----------------------|---------------------------------------|-------------------|
| | RNA | |
| Odor | : RNase-Free DNase I (Lyophilized) | Not available. |
| | β-Mercaptoethanol | Characteristic. |
| | De-paraffinization Reagent d-limonene | Not available. |
| | RNA Binding Buffer | Not available. |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | Not available. |
| | Elution Buffer | Not available. |
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | Not available. |
| | QPCR Human Reference Total | Not available. |
| | RNA | |
| Odor threshold | : RNase-Free DNase I (Lyophilized) | Not available. |
| | β-Mercaptoethanol | Not available. |
| | De-paraffinization Reagent d-limonene | Not available. |
| | RNA Binding Buffer | Not available. |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | Not available. |
| | Elution Buffer | Not available. |
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | Not available. |
| | QPCR Human Reference Total | Not available. |
| | RNA | |
| pH | : RNase-Free DNase I (Lyophilized) | Not available. |
| | β-Mercaptoethanol | Not available. |
| | De-paraffinization Reagent d-limonene | Not available. |
| | RNA Binding Buffer | 7 |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | 6.4 |
| | Elution Buffer | 7.5 |
| | DNase Reconstitution Buffer | 7.5 |
| | DNase Digestion Buffer | 7 |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | 7.5 |
| | QPCR Human Reference Total | Not available. |
| | RNA | |
| Melting point | : RNase-Free DNase I (Lyophilized) | Not available. |
| | β-Mercaptoethanol | -100°C (-148°F) |
| | De-paraffinization Reagent d-limonene | -78.35°C (-109°F) |
| | RNA Binding Buffer | Not available. |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | 0°C (32°F) |
| | Elution Buffer | 0°C (32°F) |
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | 0°C (32°F) |
| | QPCR Human Reference Total | 0°C (32°F) |
| | RNA | |

Section 9. Physical and chemical properties

| | | | |
|----------------------------------|-----------------|---------------------------------------|--|
| Boiling point | : | RNA-Free DNase I (Lyophilized) | Not available. |
| | | β-Mercaptoethanol | 157°C (314.6°F) |
| | | De-paraffinization Reagent d-limonene | 154.44°C (310°F) |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Not available. |
| | | 5x Low Salt Wash Buffer | 100°C (212°F) |
| | | Elution Buffer | 100°C (212°F) |
| | | DNase Reconstitution Buffer | Not available. |
| | | DNase Digestion Buffer | Not available. |
| | | Proteinase K | Not available. |
| | | Proteinase K Digestion Buffer | 100°C (212°F) |
| QPCR Human Reference Total RNA | 100°C (212°F) | | |
| Flash point | : | RNA-Free DNase I (Lyophilized) | Not available. |
| | | β-Mercaptoethanol | Closed cup: 74°C (165.2°F) Open cup: 74°C (165.2°F) |
| | | De-paraffinization Reagent d-limonene | Closed cup: 51°C (123.8°F) |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Not available. |
| | | 5x Low Salt Wash Buffer | Not available. |
| | | Elution Buffer | Not available. |
| | | DNase Reconstitution Buffer | Not available. |
| | | DNase Digestion Buffer | Closed cup: 23 to 37.8°C (73.4 to 100°F) |
| | | Proteinase K | Not available. |
| | | Proteinase K Digestion Buffer | Not available. |
| QPCR Human Reference Total RNA | Not available. | | |
| Evaporation rate | : | RNA-Free DNase I (Lyophilized) | Not available. |
| | | β-Mercaptoethanol | Not available. |
| | | De-paraffinization Reagent d-limonene | <1 (Water = 1 = 1) |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Not available. |
| | | 5x Low Salt Wash Buffer | Not available. |
| | | Elution Buffer | Not available. |
| | | DNase Reconstitution Buffer | Not available. |
| | | DNase Digestion Buffer | Not available. |
| | | Proteinase K | Not available. |
| | | Proteinase K Digestion Buffer | Not available. |
| QPCR Human Reference Total RNA | Not available. | | |
| Flammability (solid, gas) | : | RNA-Free DNase I (Lyophilized) | Not available. |
| | | β-Mercaptoethanol | Not applicable. |
| | | De-paraffinization Reagent d-limonene | Not applicable. |
| | | RNA Binding Buffer | Not applicable. |
| | | 1.67X High Salt Wash Buffer | Not applicable. |
| | | 5x Low Salt Wash Buffer | Not applicable. |
| | | Elution Buffer | Not applicable. |
| | | DNase Reconstitution Buffer | Not applicable. |
| | | DNase Digestion Buffer | Not applicable. |
| | | Proteinase K | Not applicable. |
| | | Proteinase K Digestion Buffer | Not applicable. |
| QPCR Human Reference Total RNA | Not applicable. | | |

Section 9. Physical and chemical properties

| | | |
|---|---------------------------------------|--|
| Lower and upper explosive (flammable) limits | β-Nase-Free DNase I (Lyophilized) | Not available. |
| | β-Mercaptoethanol | Lower: 2.3% Upper: 18% |
| | De-paraffinization Reagent d-limonene | Lower: 0.7% Upper: 6.1% |
| | RNA Binding Buffer | Not available. |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | Not available. |
| | Elution Buffer | Not available. |
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | Not available. |
| | QPCR Human Reference Total RNA | Not available. |
| | Vapor pressure | β-Nase-Free DNase I (Lyophilized) |
| β-Mercaptoethanol | | 0.13 kPa (0.98 mm Hg) [room temperature] |
| De-paraffinization Reagent d-limonene | | 0.27 kPa (2 mm Hg) [room temperature] |
| RNA Binding Buffer | | Not available. |
| 1.67X High Salt Wash Buffer | | Not available. |
| 5x Low Salt Wash Buffer | | Not available. |
| Elution Buffer | | Not available. |
| DNase Reconstitution Buffer | | Not available. |
| DNase Digestion Buffer | | Not available. |
| Proteinase K | | Not available. |
| Proteinase K Digestion Buffer | | Not available. |
| QPCR Human Reference Total RNA | | Not available. |
| Vapor density | | β-Nase-Free DNase I (Lyophilized) |
| | β-Mercaptoethanol | 2.7 [Air = 1] |
| | De-paraffinization Reagent d-limonene | 0.012 [Air = 1] |
| | RNA Binding Buffer | Not available. |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | Not available. |
| | Elution Buffer | Not available. |
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | Not available. |
| | QPCR Human Reference Total RNA | Not available. |
| | Relative density | β-Nase-Free DNase I (Lyophilized) |
| β-Mercaptoethanol | | 1.1 |
| De-paraffinization Reagent d-limonene | | Not available. |
| RNA Binding Buffer | | Not available. |
| 1.67X High Salt Wash Buffer | | Not available. |
| 5x Low Salt Wash Buffer | | Not available. |
| Elution Buffer | | Not available. |
| DNase Reconstitution Buffer | | Not available. |
| DNase Digestion Buffer | | Not available. |
| Proteinase K | | Not available. |
| Proteinase K Digestion Buffer | | Not available. |
| QPCR Human Reference Total RNA | | Not available. |

Section 9. Physical and chemical properties

| | | | |
|----------------------------------|---|---------------------------------------|--|
| Solubility | : | RNAse-Free DNase I (Lyophilized) | Easily soluble in the following materials: cold water and hot water. |
| | | β-Mercaptoethanol | Easily soluble in the following materials: cold water and hot water. |
| | | De-paraffinization Reagent d-limonene | Insoluble in the following materials: cold water and hot water. |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Soluble in the following materials: cold water and hot water. |
| | | 5x Low Salt Wash Buffer | Easily soluble in the following materials: cold water and hot water. |
| | | Elution Buffer | Easily soluble in the following materials: cold water and hot water. |
| | | DNase Reconstitution Buffer | Soluble in the following materials: cold water and hot water. |
| | | DNase Digestion Buffer | Soluble in the following materials: cold water and hot water. |
| | | Proteinase K | Not available. |
| | | Proteinase K Digestion Buffer | Easily soluble in the following materials: cold water and hot water. |
| | | QPCR Human Reference Total RNA | Easily soluble in the following materials: cold water and hot water. |
| | Partition coefficient: n-octanol/water | : | RNAse-Free DNase I (Lyophilized) |
| | | β-Mercaptoethanol | -0.056 |
| | | De-paraffinization Reagent d-limonene | Not available. |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Not available. |
| | | 5x Low Salt Wash Buffer | Not available. |
| | | Elution Buffer | Not available. |
| | | DNase Reconstitution Buffer | Not available. |
| | | DNase Digestion Buffer | Not available. |
| | | Proteinase K | Not available. |
| | | Proteinase K Digestion Buffer | Not available. |
| | | QPCR Human Reference Total RNA | Not available. |
| Auto-ignition temperature | | : | RNAse-Free DNase I (Lyophilized) |
| | | β-Mercaptoethanol | 295°C (563°F) |
| | | De-paraffinization Reagent d-limonene | 237°C (458.6°F) |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Not available. |
| | | 5x Low Salt Wash Buffer | Not available. |
| | | Elution Buffer | Not available. |
| | | DNase Reconstitution Buffer | Not available. |
| | | DNase Digestion Buffer | Not available. |
| | | Proteinase K | Not available. |
| | | Proteinase K Digestion Buffer | Not available. |
| | | QPCR Human Reference Total RNA | Not available. |
| | Decomposition temperature | : | RNAse-Free DNase I (Lyophilized) |
| | | β-Mercaptoethanol | Not available. |
| | | De-paraffinization Reagent d-limonene | Not available. |
| | | RNA Binding Buffer | Not available. |
| | | 1.67X High Salt Wash Buffer | Not available. |
| | | 5x Low Salt Wash Buffer | Not available. |
| | | Elution Buffer | Not available. |

Section 9. Physical and chemical properties

| | | |
|------------------|---------------------------------------|--|
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | Not available. |
| | QPCR Human Reference Total RNA | Not available. |
| Viscosity | : RNase-Free DNase I (Lyophilized) | Not available. |
| | β-Mercaptoethanol | Dynamic (room temperature): 3.43 mPa·s (3.43 cP) |
| | De-paraffinization Reagent d-limonene | Not available. |
| | RNA Binding Buffer | Not available. |
| | 1.67X High Salt Wash Buffer | Not available. |
| | 5x Low Salt Wash Buffer | Not available. |
| | Elution Buffer | Not available. |
| | DNase Reconstitution Buffer | Not available. |
| | DNase Digestion Buffer | Not available. |
| | Proteinase K | Not available. |
| | Proteinase K Digestion Buffer | Not available. |
| | QPCR Human Reference Total RNA | Not available. |

Section 10. Stability and reactivity

| | | |
|--------------------------------|---------------------------------------|--|
| 10.1 Reactivity | : RNase-Free DNase I (Lyophilized) | No specific test data related to reactivity available for this product or its ingredients. |
| | β-Mercaptoethanol | No specific test data related to reactivity available for this product or its ingredients. |
| | De-paraffinization Reagent d-limonene | No specific test data related to reactivity available for this product or its ingredients. |
| | RNA Binding Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | 1.67X High Salt Wash Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | 5x Low Salt Wash Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | Elution Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | DNase Reconstitution Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | DNase Digestion Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | Proteinase K | No specific test data related to reactivity available for this product or its ingredients. |
| | Proteinase K Digestion Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| | QPCR Human Reference Total RNA | No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | : RNase-Free DNase I (Lyophilized) | The product is stable. |
| | β-Mercaptoethanol | The product is stable. |
| | De-paraffinization Reagent d-limonene | The product is stable. |
| | RNA Binding Buffer | The product is stable. |
| | 1.67X High Salt Wash Buffer | The product is stable. |
| | 5x Low Salt Wash Buffer | The product is stable. |
| | Elution Buffer | The product is stable. |
| | DNase Reconstitution Buffer | The product is stable. |
| | DNase Digestion Buffer | The product is stable. |

Section 10. Stability and reactivity

| | |
|--------------------------------|------------------------|
| Proteinase K | The product is stable. |
| Proteinase K Digestion Buffer | The product is stable. |
| QPCR Human Reference Total RNA | The product is stable. |

10.3 Possibility of hazardous reactions

| | |
|---|--|
| <p>RNAse-Free DNase I (Lyophilized)</p> <p>β-Mercaptoethanol</p> <p>De-paraffinization Reagent d-limonene</p> <p>RNA Binding Buffer</p> <p>1.67X High Salt Wash Buffer</p> <p>5x Low Salt Wash Buffer</p> <p>Elution Buffer</p> <p>DNase Reconstitution Buffer</p> <p>DNase Digestion Buffer</p> <p>Proteinase K</p> <p>Proteinase K Digestion Buffer</p> <p>QPCR Human Reference Total RNA</p> | <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> <p>Under normal conditions of storage and use, hazardous reactions will not occur.</p> |
|---|--|

10.4 Conditions to avoid

| | |
|---|--|
| <p>RNAse-Free DNase I (Lyophilized)</p> <p>β-Mercaptoethanol</p> <p>De-paraffinization Reagent d-limonene</p> <p>RNA Binding Buffer</p> <p>1.67X High Salt Wash Buffer</p> <p>5x Low Salt Wash Buffer</p> <p>Elution Buffer</p> <p>DNase Reconstitution Buffer</p> <p>DNase Digestion Buffer</p> <p>Proteinase K</p> <p>Proteinase K Digestion Buffer</p> <p>QPCR Human Reference Total RNA</p> | <p>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.</p> <p>Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.</p> <p>Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.</p> <p>No specific data.</p> <p>Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.</p> <p>No specific data.</p> <p>No specific data.</p> <p>No specific data.</p> |
|---|--|

Section 10. Stability and reactivity

RNA

| | | |
|--|---------------------------------------|--|
| 10.5 Incompatible materials | : RNase-Free DNase I (Lyophilized) | Reactive or incompatible with the following materials: oxidizing materials |
| | β-Mercaptoethanol | Reactive or incompatible with the following materials: oxidizing materials |
| | De-paraffinization Reagent d-limonene | Reactive or incompatible with the following materials: oxidizing materials |
| | RNA Binding Buffer | May react or be incompatible with oxidizing materials. |
| | 1.67X High Salt Wash Buffer | May react or be incompatible with oxidizing materials. |
| | 5x Low Salt Wash Buffer | May react or be incompatible with oxidizing materials. |
| | Elution Buffer | May react or be incompatible with oxidizing materials. |
| | DNase Reconstitution Buffer | May react or be incompatible with oxidizing materials. |
| | DNase Digestion Buffer | Reactive or incompatible with the following materials: oxidizing materials |
| | Proteinase K | May react or be incompatible with oxidizing materials. |
| | Proteinase K Digestion Buffer | May react or be incompatible with oxidizing materials. |
| | QPCR Human Reference Total RNA | May react or be incompatible with oxidizing materials. |
| 10.6 Hazardous decomposition products | : RNase-Free DNase I (Lyophilized) | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | β-Mercaptoethanol | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | De-paraffinization Reagent d-limonene | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | RNA Binding Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | 1.67X High Salt Wash Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | 5x Low Salt Wash Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | Elution Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | DNase Reconstitution Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | DNase Digestion Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 10. Stability and reactivity

| | |
|--------------------------------|--|
| Proteinase K | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| Proteinase K Digestion Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| QPCR Human Reference Total RNA | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|------------------------------------|---------------|------------------------------------|--------------|
| β-Mercaptoethanol 2-Mercaptoethanol | LD50 Oral | Rat | 244 mg/kg | - |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | LD50 Dermal LD50 Oral | Rabbit Rat | >5000 mg/kg 4400 mg/kg | - - |
| DNase Reconstitution Buffer Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |
| DNase Digestion Buffer Ethanol | LC50 Inhalation Vapor LD50 Oral | Rat Rat | 124700 mg/m ³ 7 g/kg | 4 hours - |
| Sodium chloride | LD50 Oral | Rat | 3000 mg/kg | - |
| Proteinase K Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |
| Proteinase K Digestion Buffer Sodium chloride Sodium dodecyl sulphate | LD50 Oral LD50 Oral | Rat Rat | 3000 mg/kg 1288 mg/kg | - - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|--|--|------------------|--------|--|-------------|
| β-Mercaptoethanol 2-Mercaptoethanol | Eyes - Severe irritant | Rabbit | - | 2 milligrams | - |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | Skin - Mild irritant | Rabbit | - | 24 hours 10 Percent | - |
| DNase Reconstitution Buffer Glycerol | Eyes - Mild irritant Skin - Mild irritant | Rabbit Rabbit | - - | 24 hours 500 milligrams 24 hours 500 milligrams | - - |

Section 11. Toxicological information

| | | | | | |
|---|--|----------------------|--------|--|--------|
| DNase Digestion Buffer Ethanol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 0.066666667 minutes 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 100 microliters | - |
| | Skin - Mild irritant | Rabbit | - | 400 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| Sodium chloride | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant Skin - Mild irritant | Rabbit Rabbit | - - | 10 milligrams 24 hours 500 milligrams | - - |
| Proteinase K Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| Proteinase K Digestion Buffer Sodium chloride | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant Skin - Mild irritant | Rabbit Rabbit | - - | 10 milligrams 24 hours 500 milligrams | - - |
| Sodium dodecyl sulphate | Eyes - Mild irritant | Rabbit | - | 250 Micrograms | - |
| | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant Skin - Mild irritant | Rabbit Guinea pig | - - | 10 milligrams 24 hours 25 milligrams | - - |
| | Skin - Moderate irritant | Mouse | - | 24 hours 25 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 50 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 25 milligrams | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Section 11. Toxicological information

| Product/ingredient name | OSHA | IARC | NTP |
|--|------|------|-----|
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | - | 3 | - |
| DNase Digestion Buffer Ethanol | - | 1 | - |

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|---|------------|-------------------|---|
| β-Mercaptoethanol 2-Mercaptoethanol | Category 3 | Not applicable. | Respiratory tract irritation |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | Category 3 | Not applicable. | Respiratory tract irritation |
| 1.67X High Salt Wash Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride | Category 3 | Not applicable. | Respiratory tract irritation |
| DNase Digestion Buffer Ethanol | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |
| 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride | Category 3 | Not applicable. | Respiratory tract irritation |
| Proteinase K Digestion Buffer Sodium dodecyl sulphate | Category 3 | Not applicable. | Respiratory tract irritation |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|--|------------|-------------------|---------------|
| DNase Digestion Buffer Ethanol | Category 2 | Not determined | liver |

Aspiration hazard

Not available.

Information on the likely routes of exposure

- : **β-Nase-Free DNase I (Lyophilized)** Not available.
- β-Mercaptoethanol** Routes of entry anticipated: Oral, Dermal, Inhalation.
- De-paraffinization Reagent d-limonene** Routes of entry anticipated: Oral, Dermal, Inhalation.
- RNA Binding Buffer** Routes of entry anticipated: Oral, Dermal, Inhalation.

Section 11. Toxicological information

| | |
|--------------------------------|--|
| 1.67X High Salt Wash Buffer | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| 5x Low Salt Wash Buffer | Not available. |
| Elution Buffer | Not available. |
| DNase Reconstitution Buffer | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| DNase Digestion Buffer | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| Proteinase K | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| Proteinase K Digestion Buffer | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| QPCR Human Reference Total RNA | Not available. |

Potential acute health effects

Eye contact

| | |
|--|--|
| <ul style="list-style-type: none"> RNAse-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | <ul style="list-style-type: none"> Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes. Causes serious eye damage. Causes serious eye irritation. No known significant effects or critical hazards. Causes eye irritation. Causes serious eye irritation. Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. |
|--|--|

Inhalation

| | |
|--|---|
| <ul style="list-style-type: none"> RNAse-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer DNase Reconstitution Buffer DNase Digestion Buffer Proteinase K Proteinase K Digestion Buffer QPCR Human Reference Total RNA | <ul style="list-style-type: none"> Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Fatal if inhaled. May cause respiratory irritation. May cause respiratory irritation. Harmful if inhaled. Harmful if inhaled. No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |
|--|---|

Skin contact

| | |
|--|--|
| <ul style="list-style-type: none"> RNAse-Free DNase I (Lyophilized) β-Mercaptoethanol De-paraffinization Reagent d-limonene RNA Binding Buffer 1.67X High Salt Wash Buffer 5x Low Salt Wash Buffer Elution Buffer | <ul style="list-style-type: none"> No known significant effects or critical hazards. Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes skin irritation. May cause an allergic skin reaction. No known significant effects or critical hazards. |
|--|--|

Section 11. Toxicological information

| | | |
|------------------|---------------------------------------|--|
| | DNase Reconstitution Buffer | No known significant effects or critical hazards. |
| | DNase Digestion Buffer | No known significant effects or critical hazards. |
| | Proteinase K | No known significant effects or critical hazards. |
| | Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| | QPCR Human Reference Total RNA | No known significant effects or critical hazards. |
| Ingestion | : RNase-Free DNase I (Lyophilized) | No known significant effects or critical hazards. |
| | β-Mercaptoethanol | Toxic if swallowed. |
| | De-paraffinization Reagent d-limonene | No known significant effects or critical hazards. |
| | RNA Binding Buffer | Harmful if swallowed. |
| | 1.67X High Salt Wash Buffer | Harmful if swallowed. |
| | 5x Low Salt Wash Buffer | No known significant effects or critical hazards. |
| | Elution Buffer | No known significant effects or critical hazards. |
| | DNase Reconstitution Buffer | No known significant effects or critical hazards. |
| | DNase Digestion Buffer | Can cause central nervous system (CNS) depression. |
| | Proteinase K | No known significant effects or critical hazards. |
| | Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| | QPCR Human Reference Total RNA | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | | |
|--------------------|---------------------------------------|--|
| Eye contact | : RNase-Free DNase I (Lyophilized) | Adverse symptoms may include the following: irritation redness |
| | β-Mercaptoethanol | Adverse symptoms may include the following: pain watering redness |
| | De-paraffinization Reagent d-limonene | Adverse symptoms may include the following: pain or irritation watering redness |
| | RNA Binding Buffer | No specific data. |
| | 1.67X High Salt Wash Buffer | No specific data. |
| | 5x Low Salt Wash Buffer | No specific data. |
| | Elution Buffer | No specific data. |
| | DNase Reconstitution Buffer | Adverse symptoms may include the following: irritation watering redness |
| | DNase Digestion Buffer | Adverse symptoms may include the following: pain or irritation watering redness |
| | Proteinase K | Adverse symptoms may include the following: irritation watering redness |
| | Proteinase K Digestion Buffer | No specific data. |
| | QPCR Human Reference Total RNA | No specific data. |

Section 11. Toxicological information

| | | | |
|---------------------|---|---------------------------------------|---|
| Inhalation | : | RNAse-Free DNase I (Lyophilized) | Adverse symptoms may include the following: respiratory tract irritation coughing |
| | | β-Mercaptoethanol | Adverse symptoms may include the following: respiratory tract irritation coughing |
| | | De-paraffinization Reagent d-limonene | Adverse symptoms may include the following: respiratory tract irritation coughing |
| | | RNA Binding Buffer | No specific data. |
| | | 1.67X High Salt Wash Buffer | No specific data. |
| | | 5x Low Salt Wash Buffer | No specific data. |
| | | Elution Buffer | No specific data. |
| | | DNase Reconstitution Buffer | No specific data. |
| | | DNase Digestion Buffer | Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| | | Proteinase K | No specific data. |
| | | Proteinase K Digestion Buffer | No specific data. |
| | | QPCR Human Reference Total RNA | No specific data. |
| Skin contact | : | RNAse-Free DNase I (Lyophilized) | No specific data. |
| | | β-Mercaptoethanol | Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| | | De-paraffinization Reagent d-limonene | Adverse symptoms may include the following: irritation redness |
| | | RNA Binding Buffer | No specific data. |
| | | 1.67X High Salt Wash Buffer | No specific data. |
| | | 5x Low Salt Wash Buffer | No specific data. |
| | | Elution Buffer | No specific data. |
| | | DNase Reconstitution Buffer | No specific data. |
| | | DNase Digestion Buffer | No specific data. |
| | | Proteinase K | No specific data. |
| | | Proteinase K Digestion Buffer | No specific data. |
| | | QPCR Human Reference Total RNA | No specific data. |
| Ingestion | : | RNAse-Free DNase I (Lyophilized) | No specific data. |
| | | β-Mercaptoethanol | Adverse symptoms may include the following: stomach pains |
| | | De-paraffinization Reagent d-limonene | No specific data. |
| | | RNA Binding Buffer | No specific data. |
| | | 1.67X High Salt Wash Buffer | No specific data. |
| | | 5x Low Salt Wash Buffer | No specific data. |
| | | Elution Buffer | No specific data. |
| | | DNase Reconstitution Buffer | No specific data. |
| | | DNase Digestion Buffer | No specific data. |
| | | Proteinase K | No specific data. |
| | | Proteinase K Digestion Buffer | No specific data. |

Section 11. Toxicological information

QPCR Human Reference Total RNA No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

| | |
|------------------------|--|
| General | <p>☑ Nase-Free DNase I (Lyophilized) Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.</p> <p>β-Mercaptoethanol Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.</p> <p>De-paraffinization Reagent d-limonene Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.</p> <p>RNA Binding Buffer No known significant effects or critical hazards.</p> <p>1.67X High Salt Wash Buffer No known significant effects or critical hazards.</p> <p>5x Low Salt Wash Buffer No known significant effects or critical hazards.</p> <p>Elution Buffer No known significant effects or critical hazards.</p> <p>DNase Reconstitution Buffer No known significant effects or critical hazards.</p> <p>DNase Digestion Buffer May cause damage to organs through prolonged or repeated exposure.</p> <p>Proteinase K No known significant effects or critical hazards.</p> <p>Proteinase K Digestion Buffer No known significant effects or critical hazards.</p> <p>QPCR Human Reference Total RNA No known significant effects or critical hazards.</p> |
| Carcinogenicity | <p>☑ Nase-Free DNase I (Lyophilized) No known significant effects or critical hazards.</p> <p>β-Mercaptoethanol No known significant effects or critical hazards.</p> <p>De-paraffinization Reagent d-limonene No known significant effects or critical hazards.</p> <p>RNA Binding Buffer No known significant effects or critical hazards.</p> <p>1.67X High Salt Wash Buffer No known significant effects or critical hazards.</p> <p>5x Low Salt Wash Buffer No known significant effects or critical hazards.</p> <p>Elution Buffer No known significant effects or critical hazards.</p> <p>DNase Reconstitution Buffer No known significant effects or critical hazards.</p> <p>DNase Digestion Buffer No known significant effects or critical hazards.</p> <p>Proteinase K No known significant effects or critical hazards.</p> <p>Proteinase K Digestion Buffer No known significant effects or critical hazards.</p> <p>QPCR Human Reference Total RNA No known significant effects or critical hazards.</p> |
| Mutagenicity | <p>☑ Nase-Free DNase I (Lyophilized) No known significant effects or critical hazards.</p> <p>β-Mercaptoethanol No known significant effects or critical hazards.</p> <p>De-paraffinization Reagent d-limonene No known significant effects or critical hazards.</p> <p>RNA Binding Buffer No known significant effects or critical hazards.</p> <p>1.67X High Salt Wash Buffer No known significant effects or critical hazards.</p> <p>5x Low Salt Wash Buffer No known significant effects or critical hazards.</p> <p>Elution Buffer No known significant effects or critical hazards.</p> <p>DNase Reconstitution Buffer No known significant effects or critical hazards.</p> <p>DNase Digestion Buffer No known significant effects or critical hazards.</p> |

Section 11. Toxicological information

| | | |
|------------------------------|---------------------------------------|---|
| | Proteinase K | No known significant effects or critical hazards. |
| | Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| | QPCR Human Reference Total RNA | No known significant effects or critical hazards. |
| Teratogenicity | : RNase-Free DNase I (Lyophilized) | No known significant effects or critical hazards. |
| | β-Mercaptoethanol | No known significant effects or critical hazards. |
| | De-paraffinization Reagent d-limonene | No known significant effects or critical hazards. |
| | RNA Binding Buffer | No known significant effects or critical hazards. |
| | 1.67X High Salt Wash Buffer | No known significant effects or critical hazards. |
| | 5x Low Salt Wash Buffer | No known significant effects or critical hazards. |
| | Elution Buffer | No known significant effects or critical hazards. |
| | DNase Reconstitution Buffer | No known significant effects or critical hazards. |
| | DNase Digestion Buffer | No known significant effects or critical hazards. |
| | Proteinase K | No known significant effects or critical hazards. |
| | Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| | QPCR Human Reference Total RNA | No known significant effects or critical hazards. |
| Developmental effects | : RNase-Free DNase I (Lyophilized) | No known significant effects or critical hazards. |
| | β-Mercaptoethanol | No known significant effects or critical hazards. |
| | De-paraffinization Reagent d-limonene | No known significant effects or critical hazards. |
| | RNA Binding Buffer | No known significant effects or critical hazards. |
| | 1.67X High Salt Wash Buffer | No known significant effects or critical hazards. |
| | 5x Low Salt Wash Buffer | No known significant effects or critical hazards. |
| | Elution Buffer | No known significant effects or critical hazards. |
| | DNase Reconstitution Buffer | No known significant effects or critical hazards. |
| | DNase Digestion Buffer | No known significant effects or critical hazards. |
| | Proteinase K | No known significant effects or critical hazards. |
| | Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| | QPCR Human Reference Total RNA | No known significant effects or critical hazards. |
| Fertility effects | : RNase-Free DNase I (Lyophilized) | No known significant effects or critical hazards. |
| | β-Mercaptoethanol | No known significant effects or critical hazards. |
| | De-paraffinization Reagent d-limonene | No known significant effects or critical hazards. |
| | RNA Binding Buffer | No known significant effects or critical hazards. |
| | 1.67X High Salt Wash Buffer | No known significant effects or critical hazards. |
| | 5x Low Salt Wash Buffer | No known significant effects or critical hazards. |
| | Elution Buffer | No known significant effects or critical hazards. |
| | DNase Reconstitution Buffer | No known significant effects or critical hazards. |
| | DNase Digestion Buffer | No known significant effects or critical hazards. |
| | Proteinase K | No known significant effects or critical hazards. |
| | Proteinase K Digestion Buffer | No known significant effects or critical hazards. |
| | QPCR Human Reference Total RNA | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

| Route | ATE value |
|--|----------------|
| De-paraffinization Reagent d-limonene Oral | 4400 mg/kg |
| RNA Binding Buffer Oral | 1057.1 mg/kg |
| Dermal | 2325.6 mg/kg |
| Inhalation (dusts and mists) | 3.171 mg/l |
| 1.67X High Salt Wash Buffer Oral | 1282.1 mg/kg |
| Dermal | 2820.5 mg/kg |
| Inhalation (dusts and mists) | 3.846 mg/l |
| DNase Digestion Buffer Oral | 258620.7 mg/kg |
| Proteinase K Digestion Buffer Oral | 57714.5 mg/kg |
| Inhalation (dusts and mists) | 150.9 mg/l |

| | | |
|--------------------------|---|--|
| Other information | : | RNase-Free DNase I (Lyophilized) Not available. β-Mercaptoethanol Not available. De-paraffinization Reagent d-limonene Not available. RNA Binding Buffer Not available. 1.67X High Salt Wash Buffer Not available. 5x Low Salt Wash Buffer Not available. Elution Buffer Not available. DNase Reconstitution Buffer Not available. DNase Digestion Buffer Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking. Proteinase K Not available. Proteinase K Digestion Buffer Not available. QPCR Human Reference Total RNA Not available. |
|--------------------------|---|--|

Section 12. Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|--|--|---|----------------------|
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | Acute EC50 421 µg/l Fresh water Acute EC50 688 µg/l Fresh water | Daphnia - Daphnia magna Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours 96 hours |
| DNase Reconstitution Buffer Glycerol | Acute LC50 54000 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| DNase Digestion Buffer Ethanol | Acute EC50 17.921 mg/l Marine water | Algae - Ulva pertusa | 96 hours |

Section 12. Ecological information

| | | | | |
|-------------------------------------|--|---|-----------------------------------|----------|
| Sodium chloride | Acute EC50 2000 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours | |
| | Acute LC50 25500 µg/l Marine water | Crustaceans - Artemia franciscana - Larvae | 48 hours | |
| | Acute LC50 42000 µg/l Fresh water | Fish - Oncorhynchus mykiss | 4 days | |
| | Chronic NOEC 4.995 mg/l Marine water | Algae - Ulva pertusa | 96 hours | |
| | Chronic NOEC 100 µl/L Fresh water | Daphnia - Daphnia magna - Neonate | 21 days | |
| | Chronic NOEC 0.375 µl/L Fresh water | Fish - Gambusia holbrooki - Larvae | 12 weeks | |
| | Acute EC50 4.74 g/L Fresh water | Algae - Chlamydomonas reinhardtii | 96 hours | |
| | Acute EC50 519.6 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours | |
| | Acute EC50 402600 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours | |
| | Acute IC50 6.87 g/L Fresh water | Aquatic plants - Lemna minor | 96 hours | |
| Proteinase K Glycerol | Acute LC50 1000000 µg/l Fresh water | Fish - Morone saxatilis - Larvae | 96 hours | |
| | Chronic LC10 781 mg/l Fresh water | Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) | 3 weeks | |
| | Chronic NOEC 6 g/L Fresh water | Aquatic plants - Lemna minor | 96 hours | |
| | Chronic NOEC 0.314 g/L Fresh water | Daphnia - Daphnia pulex | 21 days | |
| | Chronic NOEC 100 mg/l Fresh water | Fish - Gambusia holbrooki - Adult | 8 weeks | |
| | Proteinase K Digestion Buffer Sodium chloride | Acute LC50 54000 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| | | Acute EC50 4.74 g/L Fresh water | Algae - Chlamydomonas reinhardtii | 96 hours |
| | | Acute EC50 519.6 mg/l Fresh water | Crustaceans - Cypris subglobosa | 48 hours |
| | | Acute EC50 402600 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | | Acute IC50 6.87 g/L Fresh water | Aquatic plants - Lemna minor | 96 hours |
| Acute LC50 1000000 µg/l Fresh water | | Fish - Morone saxatilis - Larvae | 96 hours | |
| Chronic LC10 781 mg/l Fresh water | | Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) | 3 weeks | |
| Chronic NOEC 6 g/L Fresh water | | Aquatic plants - Lemna minor | 96 hours | |
| Chronic NOEC 0.314 g/L Fresh water | | Daphnia - Daphnia pulex | 21 days | |
| Chronic NOEC 100 mg/l Fresh water | | Fish - Gambusia holbrooki - Adult | 8 weeks | |
| Sodium dodecyl sulphate | Acute EC50 1200 µg/l Marine water | Algae - Skeletonema costatum | 96 hours | |
| | Acute LC50 900 µg/l Marine water | Crustaceans - Artemia salina - Adult | 48 hours | |
| | Acute LC50 1400 µg/l Fresh water | Daphnia - Daphnia pulex - Neonate | 48 hours | |
| | Acute LC50 590 µg/l Fresh water | Fish - Cirrhinus mrigala - Larvae | 96 hours | |
| | Chronic NOEC 1.25 mg/l Marine water | Algae - Ulva fasciata - Zoea | 96 hours | |
| | Chronic NOEC 1 mg/l Fresh water | Crustaceans - Pseudosida ramosa - Neonate | 21 days | |
| | Chronic NOEC 3.2 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 21 days | |
| | Chronic NOEC >1357 µg/l Fresh water | Fish - Pimephales promelas | 42 days | |

[12.2 Persistence and degradability](#)

Section 12. Ecological information

| Product/ingredient name | Test | Result | Dose | Inoculum |
|--|--|----------------|------|----------|
| DNase Reconstitution Buffer Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |
| Proteinase K Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|--|-------------------|------------|------------------|
| DNase Digestion Buffer Ethanol | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-----|-----------|
| β-Mercaptoethanol 2-Mercaptoethanol | -0.056 | - | low |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | 4.38 | - | high |
| DNase Reconstitution Buffer Glycerol | -1.76 | - | low |
| DNase Digestion Buffer Ethanol | -0.35 | 0.5 | low |
| Proteinase K Glycerol | -1.76 | - | low |
| Proteinase K Digestion Buffer Sodium dodecyl sulphate | -2.03 | - | low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. 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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. 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 Classification | TDG Classification | Mexico Classification | IMDG | IATA |
|----------------------------|--|--|--|--|--|
| UN number | UN3316 | UN3316 | UN3316 | UN3316 | UN3316 |
| UN proper shipping name | ☑ Chemical kits | CHEMICAL KIT | EQUIPO QUIMICO | CHEMICAL KIT | Chemical kit |
| Transport hazard class(es) | 9  | 9   | 9  | 9   | 9  |
| Packing group | II | II | II | II | II |
| Environmental hazards | ☒ No. | Yes. | Yes. The environmentally hazardous substance mark is not required. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

Additional information

☑ **Remarks:** Excepted Quantity

DOT Classification : ☑ **Limited quantity** Yes.
Packaging instruction Exceptions: 161. Non-bulk: 161. Bulk: None.
Quantity limitation Passenger aircraft/rail: 10 kg. Cargo aircraft: 10 kg.
Special provisions 15

Section 14. Transport information

- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.
Passenger Carrying Road or Rail Index 10
Special provisions 65, 141
- Mexico Classification** : **Special provisions** 251, 340
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-A, _S-P_
Special provisions 251, 340
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163

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

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) PAIR:** octamethylcyclotetrasiloxane; Polyoxyethylene octyl phenyl ether
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Edetic acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : 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

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Section 15. Regulatory information

| | | |
|-----------------------|---|---|
| Classification | : RNase-Free DNase I (Lyophilized) β-Mercaptoethanol | COMBUSTIBLE DUSTS FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 2 ACUTE TOXICITY (inhalation) - Category 2 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 3 |
| | De-paraffinization Reagent d-limonene | SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 Not applicable. Not applicable. |
| | RNA Binding Buffer | EYE IRRITATION - Category 2B FLAMMABLE LIQUIDS - Category 3 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2 EYE IRRITATION - Category 2B |
| | 1.67X High Salt Wash Buffer | Not applicable. |
| | 5x Low Salt Wash Buffer | Not applicable. |
| | Elution Buffer | Not applicable. |
| | DNase Reconstitution Buffer | Not applicable. |
| | DNase Digestion Buffer | Not applicable. |
| | Proteinase K | Not applicable. |
| | Proteinase K Digestion Buffer | Not applicable. |
| | QPCR Human Reference Total RNA | Not applicable. |

Composition/information on ingredients

| Name | % | Classification |
|--|-----------|--|
| RNase-Free DNase I (Lyophilized) Enzyme. | 100 | COMBUSTIBLE DUSTS |
| β-Mercaptoethanol 2-Mercaptoethanol | 100 | FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 2 ACUTE TOXICITY (inhalation) - Category 2 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| De-paraffinization Reagent d-limonene (R)-p-Mentha-1,8-diene | 100 | FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| RNA Binding Buffer Guanidinium thiocyanate | ≥25 - ≤50 | ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 |

Section 15. Regulatory information

| | | |
|---|-----------|--|
| 1.67X High Salt Wash Buffer Guanidinium thiocyanate | ≥25 - ≤50 | ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 |
| 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride | ≤3 | |
| DNase Reconstitution Buffer Glycerol | ≥50 - ≤75 | EYE IRRITATION - Category 2A |
| DNase Digestion Buffer Ethanol | ≥25 - ≤50 | FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2 HNOC - Defatting irritant SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 EYE IRRITATION - Category 2A |
| 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride | ≤5 | |
| Sodium chloride | ≤3 | |
| Proteinase K Glycerol | ≥25 - ≤50 | EYE IRRITATION - Category 2A |
| Proteinase K Digestion Buffer Sodium chloride | ≤3 | EYE IRRITATION - Category 2A |
| Sodium dodecyl sulphate | ≤2.5 | 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 |

State regulations

Massachusetts

: The following components are listed: 2-MERCAPTOETHANOL; GLYCERINE MIST; ETHYL ALCOHOL; DENATURED ALCOHOL

New York

: None of the components are listed.

New Jersey

: The following components are listed: THIOGLYCOL; 2-MERCAPTOETHANOL; GLYCERIN; 1,2,3-PROPANETRIOL; ETHYL ALCOHOL; ALCOHOL

Pennsylvania

: The following components are listed: ETHANOL, 2-MERCAPTO-; 1,2, 3-PROPANETRIOL; DENATURED ALCOHOL; ETHANOL

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

Section 15. Regulatory information

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

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

Section 16. Other information

History

| | |
|-------------------------------|---------------|
| Date of issue | : 01/23/2018 |
| Date of previous issue | : 09/20/2016. |
| Version | : 6 |

Indicates information that has changed from previously issued version.

Notice to reader

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