Conforms to HPR 2015

# SAFETY DATA SHEET

Agilent Technologies

SideStep II QRT-PCR Master Mix Kit - 1-Step, Part Number 400917

## Section 1. Identification

**Product identifier** : SideStep II QRT-PCR Master Mix Kit - 1-Step, Part Number 400917

**Part no. (chemical kit)** : 400917

**Part no.** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | 400900-21 |
| SideStep II Neutralization Buffer | 400916-53 |
| SideStep II DNase I | 400916-51 |
| SideStep II DNase Digestion Buffer 10X | 400916-52 |
| QPCR Normalization Primer 1 | 400916-54 |
| QPCR Normalization Primer 2 | 400916-55 |
| QPCR Normalization Primer 3 | 400916-56 |
| 2X Brilliant II QRT-PCR Master Mix | 600809-51 |
| Reference Dye | 600530-53 |
| RT/RNase Block Enzyme Mixture | 600809-52 |

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

**Identified uses** : Analytical reagent.

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | 10 ml |
| SideStep II Neutralization Buffer | 0.1 ml |
| SideStep II DNase I | 0.05 ml (500 U  10 U/µl) |
| SideStep II DNase Digestion Buffer 10X | 0.1 ml |
| QPCR Normalization Primer 1 | 0.0125 ml (45 µM  12.5 µl) |
| QPCR Normalization Primer 2 | 0.0125 ml (30 µM  12.5 µl) |
| QPCR Normalization Primer 3 | 0.0125 ml (45 µM  12.5 µl) |
| 2X Brilliant II QRT-PCR Master Mix | 2 x 2.5 ml |
| Reference Dye | 0.1 ml (100 µl  1 mM) |
| RT/RNase Block Enzyme Mixture | 0.4 ml |

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

**Emergency telephone number (with hours of operation)** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazard identification

**Classification of the substance or mixture**

**SideStep Lysis & Stabilization Buffer**

| | |
|---|---|
| H319 | EYE IRRITATION - Category 2A |
| H412 | AQUATIC HAZARD (LONG-TERM) - Category 3 |

**SideStep II DNase I**

| | |
|---|---|
| H320 | EYE IRRITATION - Category 2B |

**2X Brilliant II QRT-PCR Master Mix**

| | |
|---|---|
| H320 | EYE IRRITATION - Category 2B |

**RT/RNase Block Enzyme Mixture**

# Section 2. Hazard identification

H320 EYE IRRITATION - Category 2B

## GHS label elements

**Hazard pictograms** : SideStep Lysis & Stabilization Buffer

**Signal word**

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Warning |
| SideStep II Neutralization Buffer | No signal word. |
| SideStep II DNase I | Warning |
| SideStep II DNase Digestion Buffer 10X | No signal word. |
| QPCR Normalization Primer 1 | No signal word. |
| QPCR Normalization Primer 2 | No signal word. |
| QPCR Normalization Primer 3 | No signal word. |
| 2X Brilliant II QRT-PCR Master Mix | Warning |
| Reference Dye | No signal word. |
| RT/RNase Block Enzyme Mixture | Warning |

**Hazard statements**

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | H319 - Causes serious eye irritation.<br>H412 - Harmful to aquatic life with long lasting effects. |
| SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| SideStep II DNase I | H320 - Causes eye irritation. |
| SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| 2X Brilliant II QRT-PCR Master Mix | H320 - Causes eye irritation. |
| Reference Dye | No known significant effects or critical hazards. |
| RT/RNase Block Enzyme Mixture | H320 - Causes eye irritation. |

## Precautionary statements

**Prevention**

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | P280 - Wear eye or face protection.<br>P273 - Avoid release to the environment. |
| SideStep II Neutralization Buffer | Not applicable. |
| SideStep II DNase I | Not applicable. |
| SideStep II DNase Digestion Buffer 10X | Not applicable. |
| QPCR Normalization Primer 1 | Not applicable. |
| QPCR Normalization Primer 2 | Not applicable. |

# Section 2. Hazard identification

| | | | |
|---|---|---|---|
| | | QPCR Normalization Primer 3 | Not applicable. |
| | | 2X Brilliant II QRT-PCR Master Mix | Not applicable. |
| | | Reference Dye | Not applicable. |
| | | RT/RNase Block Enzyme Mixture | Not applicable. |
| **Response** | : | SideStep Lysis & Stabilization Buffer | P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | | SideStep II Neutralization Buffer | Not applicable. |
| | | SideStep II DNase I | P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | | SideStep II DNase Digestion Buffer 10X | Not applicable. |
| | | QPCR Normalization Primer 1 | Not applicable. |
| | | QPCR Normalization Primer 2 | Not applicable. |
| | | QPCR Normalization Primer 3 | Not applicable. |
| | | 2X Brilliant II QRT-PCR Master Mix | P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | | Reference Dye | Not applicable. |
| | | RT/RNase Block Enzyme Mixture | P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| **Storage** | : | SideStep Lysis & Stabilization Buffer | Not applicable. |
| | | SideStep II Neutralization Buffer | Not applicable. |
| | | SideStep II DNase I | Not applicable. |
| | | SideStep II DNase Digestion Buffer 10X | Not applicable. |
| | | QPCR Normalization Primer 1 | Not applicable. |
| | | QPCR Normalization Primer 2 | Not applicable. |
| | | QPCR Normalization Primer 3 | Not applicable. |
| | | 2X Brilliant II QRT-PCR Master Mix | Not applicable. |
| | | Reference Dye | Not applicable. |
| | | RT/RNase Block Enzyme Mixture | Not applicable. |

# Section 2. Hazard identification

| | | | |
|---|---|---|---|
| **Disposal** | : | SideStep Lysis & Stabilization Buffer | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | | SideStep II Neutralization Buffer | Not applicable. |
| | | SideStep II DNase I | Not applicable. |
| | | SideStep II DNase Digestion Buffer 10X | Not applicable. |
| | | QPCR Normalization Primer 1 | Not applicable. |
| | | QPCR Normalization Primer 2 | Not applicable. |
| | | QPCR Normalization Primer 3 | Not applicable. |
| | | 2X Brilliant II QRT-PCR Master Mix | Not applicable. |
| | | Reference Dye | Not applicable. |
| | | RT/RNase Block Enzyme Mixture | Not applicable. |
| **Supplemental label elements** | : | SideStep Lysis & Stabilization Buffer | None known. |
| | | SideStep II Neutralization Buffer | None known. |
| | | SideStep II DNase I | None known. |
| | | SideStep II DNase Digestion Buffer 10X | None known. |
| | | QPCR Normalization Primer 1 | None known. |
| | | QPCR Normalization Primer 2 | None known. |
| | | QPCR Normalization Primer 3 | None known. |
| | | 2X Brilliant II QRT-PCR Master Mix | None known. |
| | | Reference Dye | None known. |
| | | RT/RNase Block Enzyme Mixture | None known. |
| | | SideStep II DNase Digestion Buffer 10X | Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.2% |
| **Other hazards which do not result in classification** | : | SideStep Lysis & Stabilization Buffer | None known. |
| | | SideStep II Neutralization Buffer | None known. |
| | | SideStep II DNase I | None known. |
| | | SideStep II DNase Digestion Buffer 10X | None known. |
| | | QPCR Normalization Primer 1 | None known. |
| | | QPCR Normalization Primer 2 | None known. |
| | | QPCR Normalization Primer 3 | None known. |
| | | 2X Brilliant II QRT-PCR Master Mix | None known. |
| | | Reference Dye | None known. |
| | | RT/RNase Block Enzyme Mixture | None known. |

# Section 3. Composition/information on ingredients

**Substance/mixture** : SideStep Lysis & Stabilization Buffer — Mixture
SideStep II Neutralization Buffer — Mixture
SideStep II DNase I — Mixture
SideStep II DNase Digestion Buffer 10X — Mixture
QPCR Normalization Primer 1 — Mixture
QPCR Normalization Primer 2 — Mixture
QPCR Normalization Primer 3 — Mixture
2X Brilliant II QRT-PCR Master Mix — Mixture
Reference Dye — Mixture
RT/RNase Block Enzyme Mixture — Mixture

| Ingredient name | Synonyms | % (w/w) | CAS number |
|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | |
| Polyoxyethylene octyl phenyl ether | Triton X-100 | ≥1 - ≤5 | 9002-93-1 |
| **SideStep II DNase I** | | | |
| Glycerol | Glycerol | ≥30 - ≤60 | 56-81-5 |
| **2X Brilliant II QRT-PCR Master Mix** | | | |
| Glycerol | Glycerol | ≥10 - ≤30 | 56-81-5 |
| Polyethylene glycol | Polyethylene glycol | ≥10 - ≤30 | 25322-68-3 |
| Dimethyl sulfoxide | Dimethyl sulfoxide | ≥1 - ≤5 | 67-68-5 |
| Magnesium chloride | Magnesium chloride | ≥0.1 - ≤1 | 7786-30-3 |
| **Reference Dye** | | | |
| Potassium chloride | Potassium Chloride | ≥1 - ≤5 | 7447-40-7 |
| **RT/RNase Block Enzyme Mixture** | | | |
| Glycerol | Glycerol | ≥30 - ≤60 | 56-81-5 |

**Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.**

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

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

# Section 4. First-aid measures

## Description of necessary first aid measures

| | | | |
|---|---|---|---|
| **Eye contact** | : | SideStep Lysis & Stabilization 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. |
| | | SideStep II Neutralization 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. |
| | | SideStep II DNase I | 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. |
| | | SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | | QPCR Normalization Primer 2 | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. |
| | | QPCR Normalization Primer 3 | 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. |
| | | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | | Reference Dye | 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. |
| | | RT/RNase Block Enzyme Mixture | 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. |
| **Inhalation** | : | SideStep Lysis & Stabilization 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. |
| | | SideStep II Neutralization Buffer | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | | SideStep II DNase I | Remove victim to fresh air and keep at rest in a |

# Section 4. First-aid measures

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|---|---|---|---|
| | | | 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. |
| | | SideStep II DNase Digestion Buffer 10X | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | | QPCR Normalization Primer 1 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | | QPCR Normalization Primer 2 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | | QPCR Normalization Primer 3 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | | Reference Dye | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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. |
| | | RT/RNase Block Enzyme Mixture | 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. |
| **Skin contact** | : | SideStep Lysis & Stabilization 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. |
| | | SideStep II Neutralization Buffer | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | SideStep II DNase I | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing |

# Section 4. First-aid measures

| | | | |
|---|---|---|---|
| | | | before reuse. Clean shoes thoroughly before reuse. |
| | | SideStep II DNase Digestion Buffer 10X | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | QPCR Normalization Primer 1 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | QPCR Normalization Primer 2 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | QPCR Normalization Primer 3 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | | Reference Dye | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | RT/RNase Block Enzyme Mixture | 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. |
| **Ingestion** | : | SideStep Lysis & Stabilization Buffer | Wash out mouth with water. Remove dentures if any. 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. |
| | | SideStep II Neutralization Buffer | Wash out mouth with water. 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. |
| | | SideStep II DNase I | Wash out mouth with water. Remove dentures if any. 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. |
| | | SideStep II DNase Digestion Buffer 10X | Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce |

# Section 4. First-aid measures

| | |
|---|---|
| | vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. |
| QPCR Normalization Primer 1 | Wash out mouth with water. 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 Normalization Primer 2 | Wash out mouth with water. 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 Normalization Primer 3 | Wash out mouth with water. 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. |
| 2X Brilliant II QRT-PCR Master Mix | Wash out mouth with water. Remove dentures if any. 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. |
| Reference Dye | Wash out mouth with water. 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. |
| RT/RNase Block Enzyme Mixture | Wash out mouth with water. Remove dentures if any. 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. |

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

# Section 4. First-aid measures

| | | | |
|---|---|---|---|
| **Eye contact** | : | SideStep Lysis & Stabilization Buffer | Causes serious eye irritation. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | Causes eye irritation. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | Causes eye irritation. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | Causes eye irritation. |
| **Inhalation** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |
| **Skin contact** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |

# Section 4. First-aid measures

**Ingestion** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| SideStep II DNase I | No known significant effects or critical hazards. |
| SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| Reference Dye | No known significant effects or critical hazards. |
| RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |

**Over-exposure signs/symptoms**

**Eye contact** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| SideStep II Neutralization Buffer | No specific data. |
| SideStep II DNase I | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| SideStep II DNase Digestion Buffer 10X | No specific data. |
| QPCR Normalization Primer 1 | No specific data. |
| QPCR Normalization Primer 2 | No specific data. |
| QPCR Normalization Primer 3 | No specific data. |
| 2X Brilliant II QRT-PCR Master Mix | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| Reference Dye | No specific data. |
| RT/RNase Block Enzyme Mixture | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |

**Inhalation** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | No specific data. |
| SideStep II Neutralization Buffer | No specific data. |
| SideStep II DNase I | No specific data. |
| SideStep II DNase Digestion Buffer 10X | No specific data. |
| QPCR Normalization Primer 1 | No specific data. |
| QPCR Normalization Primer | No specific data. |

# Section 4. First-aid measures

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|---|---|---|---|
| | | 2 | |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | No specific data. |
| **Skin contact** | : | SideStep Lysis & Stabilization Buffer | No specific data. |
| | | SideStep II Neutralization Buffer | No specific data. |
| | | SideStep II DNase I | No specific data. |
| | | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | | QPCR Normalization Primer 1 | No specific data. |
| | | QPCR Normalization Primer 2 | No specific data. |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | No specific data. |
| **Ingestion** | : | SideStep Lysis & Stabilization Buffer | No specific data. |
| | | SideStep II Neutralization Buffer | No specific data. |
| | | SideStep II DNase I | No specific data. |
| | | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | | QPCR Normalization Primer 1 | No specific data. |
| | | QPCR Normalization Primer 2 | No specific data. |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | No specific data. |

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

| | | | |
|---|---|---|---|
| **Notes to physician** | : | SideStep Lysis & Stabilization Buffer | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | | SideStep II Neutralization Buffer | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | | SideStep II DNase I | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | | SideStep II DNase Digestion Buffer 10X | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | | QPCR Normalization Primer | Treat symptomatically. Contact poison treatment |

# Section 4. First-aid measures

| | | |
|---|---|---|
| | 1 | specialist immediately if large quantities have been ingested or inhaled. |
| | QPCR Normalization Primer 2 | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | QPCR Normalization Primer 3 | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | 2X Brilliant II QRT-PCR Master Mix | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | Reference Dye | 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. |
| | RT/RNase Block Enzyme Mixture | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| **Specific treatments** : | SideStep Lysis & Stabilization Buffer | No specific treatment. |
| | SideStep II Neutralization Buffer | No specific treatment. |
| | SideStep II DNase I | No specific treatment. |
| | SideStep II DNase Digestion Buffer 10X | No specific treatment. |
| | QPCR Normalization Primer 1 | No specific treatment. |
| | QPCR Normalization Primer 2 | No specific treatment. |
| | QPCR Normalization Primer 3 | No specific treatment. |
| | 2X Brilliant II QRT-PCR Master Mix | No specific treatment. |
| | Reference Dye | No specific treatment. |
| | RT/RNase Block Enzyme Mixture | No specific treatment. |
| **Protection of first-aiders** : | SideStep Lysis & Stabilization 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. |
| | SideStep II Neutralization Buffer | No action shall be taken involving any personal risk or without suitable training. |
| | SideStep II DNase I | 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. |
| | SideStep II DNase Digestion Buffer 10X | No action shall be taken involving any personal risk or without suitable training. |
| | QPCR Normalization Primer 1 | No action shall be taken involving any personal risk or without suitable training. |
| | QPCR Normalization Primer 2 | No action shall be taken involving any personal risk or without suitable training. |
| | QPCR Normalization Primer 3 | No action shall be taken involving any personal risk or without suitable training. |
| | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | Reference Dye | No action shall be taken involving any personal risk or without suitable training. |

# Section 4. First-aid measures

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| RT/RNase Block Enzyme Mixture | 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. |

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

## Extinguishing media

### Suitable extinguishing media

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Use an extinguishing agent suitable for the surrounding fire. |
| SideStep II Neutralization Buffer | Use an extinguishing agent suitable for the surrounding fire. |
| SideStep II DNase I | Use an extinguishing agent suitable for the surrounding fire. |
| SideStep II DNase Digestion Buffer 10X | Use an extinguishing agent suitable for the surrounding fire. |
| QPCR Normalization Primer 1 | Use an extinguishing agent suitable for the surrounding fire. |
| QPCR Normalization Primer 2 | Use an extinguishing agent suitable for the surrounding fire. |
| QPCR Normalization Primer 3 | Use an extinguishing agent suitable for the surrounding fire. |
| 2X Brilliant II QRT-PCR Master Mix | Use an extinguishing agent suitable for the surrounding fire. |
| Reference Dye | Use an extinguishing agent suitable for the surrounding fire. |
| RT/RNase Block Enzyme Mixture | Use an extinguishing agent suitable for the surrounding fire. |

### Unsuitable extinguishing media

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | None known. |
| SideStep II Neutralization Buffer | None known. |
| SideStep II DNase I | None known. |
| SideStep II DNase Digestion Buffer 10X | None known. |
| QPCR Normalization Primer 1 | None known. |
| QPCR Normalization Primer 2 | None known. |
| QPCR Normalization Primer 3 | None known. |
| 2X Brilliant II QRT-PCR Master Mix | None known. |
| Reference Dye | None known. |
| RT/RNase Block Enzyme Mixture | None known. |

### Specific hazards arising from the chemical

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| SideStep Lysis & Stabilization Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| SideStep II Neutralization Buffer | In a fire or if heated, a pressure increase will occur and the container may burst. |
| SideStep II DNase I | In a fire or if heated, a pressure increase will occur and the container may burst. |

# Section 5. Fire-fighting measures

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| | SideStep II DNase Digestion Buffer 10X | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | QPCR Normalization Primer 1 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | QPCR Normalization Primer 2 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | QPCR Normalization Primer 3 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | 2X Brilliant II QRT-PCR Master Mix | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Reference Dye | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | RT/RNase Block Enzyme Mixture | In a fire or if heated, a pressure increase will occur and the container may burst. |
| **Hazardous thermal decomposition products** : | SideStep Lysis & Stabilization Buffer | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
| | SideStep II Neutralization Buffer | No specific data. |
| | SideStep II DNase I | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
| | SideStep II DNase Digestion Buffer 10X | Decomposition products may include the following materials:<br>halogenated compounds<br>metal oxide/oxides |
| | QPCR Normalization Primer 1 | No specific data. |
| | QPCR Normalization Primer 2 | No specific data. |
| | QPCR Normalization Primer 3 | No specific data. |
| | 2X Brilliant II QRT-PCR Master Mix | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>sulfur oxides |
| | Reference Dye | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide<br>nitrogen oxides<br>halogenated compounds<br>metal oxide/oxides |
| | RT/RNase Block Enzyme Mixture | Decomposition products may include the following materials:<br>carbon dioxide<br>carbon monoxide |
| **Special protective actions for fire-fighters** : | SideStep Lysis & Stabilization 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. |
| | SideStep II Neutralization 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. |
| | SideStep II DNase I | Promptly isolate the scene by removing all persons |

# Section 5. Fire-fighting measures

| | | |
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| | | from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | QPCR Normalization Primer 2 | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | QPCR Normalization Primer 3 | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | Reference Dye | 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. |
| | RT/RNase Block Enzyme Mixture | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. |
| **Special protective equipment for fire-fighters** : | SideStep Lysis & Stabilization Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | SideStep II Neutralization Buffer | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | SideStep II DNase I | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | SideStep II DNase Digestion Buffer 10X | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | QPCR Normalization Primer 1 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | QPCR Normalization Primer 2 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | QPCR Normalization Primer 3 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | 2X Brilliant II QRT-PCR | Fire-fighters should wear appropriate protective |

# Section 5. Fire-fighting measures

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| Master Mix | equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| Reference Dye | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| RT/RNase Block Enzyme Mixture | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** :

| | |
|---|---|
| SideStep Lysis & Stabilization 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. |
| SideStep II Neutralization 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. |
| SideStep II DNase I | 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. |
| SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |
| QPCR Normalization Primer 2 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. |
| QPCR Normalization Primer 3 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal |

# Section 6. Accidental release measures

| | | |
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| | | protective equipment. |
| | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | Reference Dye | 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. |
| | RT/RNase Block Enzyme Mixture | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| **For emergency responders :** | SideStep Lysis & Stabilization Buffer | 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". |
| | SideStep II Neutralization Buffer | 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". |
| | SideStep II DNase I | 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". |
| | SideStep II DNase Digestion Buffer 10X | 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". |
| | QPCR Normalization Primer 1 | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | QPCR Normalization Primer 2 | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| | QPCR Normalization Primer 3 | 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". |
| | 2X Brilliant II QRT-PCR Master Mix | 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". |
| | Reference Dye | 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". |
| | RT/RNase Block Enzyme | If specialized clothing is required to deal with the |

# Section 6. Accidental release measures

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|---|---|---|
| | Mixture | spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| **Environmental precautions** : | SideStep Lysis & Stabilization 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). Water polluting material. May be harmful to the environment if released in large quantities. |
| | SideStep II Neutralization 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). |
| | SideStep II DNase I | 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). |
| | SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| | QPCR Normalization Primer 2 | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| | QPCR Normalization Primer 3 | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |
| | 2X Brilliant II QRT-PCR Master Mix | 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). |
| | Reference Dye | 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). |
| | RT/RNase Block Enzyme Mixture | 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). |

**Methods and materials for containment and cleaning up**

# Section 6. Accidental release measures

| | | |
|---|---|---|
| **Methods for cleaning up** : | SideStep Lysis & Stabilization 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. |
| | SideStep II Neutralization 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. |
| | SideStep II DNase I | 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. |
| | SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| | QPCR Normalization Primer 2 | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| | QPCR Normalization Primer 3 | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | Reference Dye | 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. |
| | RT/RNase Block Enzyme Mixture | Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |

# Section 7. Handling and storage

## Precautions for safe handling

| | | | |
|---|---|---|---|
| **Protective measures** | : | SideStep Lysis & Stabilization Buffer | Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| | | SideStep II Neutralization Buffer | Put on appropriate personal protective equipment (see Section 8). |
| | | SideStep II DNase I | 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. |
| | | SideStep II DNase Digestion Buffer 10X | Put on appropriate personal protective equipment (see Section 8). |
| | | QPCR Normalization Primer 1 | Put on appropriate personal protective equipment (see Section 8). |
| | | QPCR Normalization Primer 2 | Put on appropriate personal protective equipment (see Section 8). |
| | | QPCR Normalization Primer 3 | Put on appropriate personal protective equipment (see Section 8). |
| | | 2X Brilliant II QRT-PCR Master Mix | 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. |
| | | Reference Dye | Put on appropriate personal protective equipment (see Section 8). |
| | | RT/RNase Block Enzyme Mixture | 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. |
| **Advice on general occupational hygiene** | : | SideStep Lysis & Stabilization 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. |
| | | SideStep II Neutralization 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. |

# Section 7. Handling and storage

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| SideStep II DNase I | 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. |
| SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | 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 Normalization Primer 2 | 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 Normalization Primer 3 | 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. |
| 2X Brilliant II QRT-PCR Master Mix | 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. |
| Reference Dye | 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. |
| RT/RNase Block Enzyme Mixture | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

# Section 7. Handling and storage

| | | |
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| **Conditions for safe storage, including any incompatibilities** : | SideStep Lysis & Stabilization 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. |
| | SideStep II Neutralization 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. |
| | SideStep II DNase I | 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. |
| | SideStep II DNase Digestion Buffer 10X | 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 Normalization Primer 1 | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. 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 Normalization Primer 2 | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until |

# Section 7. Handling and storage

| | |
|---|---|
| | 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 Normalization Primer 3 | Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |
| 2X Brilliant II QRT-PCR Master Mix | 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. |
| Reference Dye | 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. |
| RT/RNase Block Enzyme Mixture | 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. |

# Section 8. Exposure controls/personal protection

## Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| **SideStep II DNase I** | |
| Glycerol | **CA Alberta Provincial (Canada, 6/2018).**<br>8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist<br>**CA Quebec Provincial (Canada, 6/2021).**<br>TWAEV: 10 mg/m³ 8 hours. Form: mist<br>**CA Saskatchewan Provincial (Canada, 7/2013).**<br>STEL: 20 mg/m³ 15 minutes. Form: mist<br>TWA: 10 mg/m³ 8 hours. Form: mist<br>**CA British Columbia Provincial (Canada, 6/2021).**<br>TWA: 3 mg/m³ 8 hours. Form: respirable mist<br>TWA: 10 mg/m³ 8 hours. Form: total mist |
| **2X Brilliant II QRT-PCR Master Mix** | |
| Glycerol | **CA Alberta Provincial (Canada, 6/2018).**<br>8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist<br>**CA Quebec Provincial (Canada, 6/2021).**<br>TWAEV: 10 mg/m³ 8 hours. Form: mist<br>**CA Saskatchewan Provincial (Canada, 7/2013).**<br>STEL: 20 mg/m³ 15 minutes. Form: mist<br>TWA: 10 mg/m³ 8 hours. Form: mist<br>**CA British Columbia Provincial (Canada, 6/2021).**<br>TWA: 3 mg/m³ 8 hours. Form: respirable mist<br>TWA: 10 mg/m³ 8 hours. Form: total mist |
| Polyethylene glycol | **OARS WEEL (United States, 1/2021).**<br>TWA: 10 mg/m³ 8 hours. |
| Dimethyl sulfoxide | **OARS WEEL (United States, 1/2021).**<br>TWA: 250 ppm 8 hours. |
| **RT/RNase Block Enzyme Mixture** | |
| Glycerol | **CA Alberta Provincial (Canada, 6/2018).**<br>8 hrs OEL: 10 mg/m³ 8 hours. Form: Mist<br>**CA Quebec Provincial (Canada, 6/2021).**<br>TWAEV: 10 mg/m³ 8 hours. Form: mist<br>**CA Saskatchewan Provincial (Canada, 7/2013).**<br>STEL: 20 mg/m³ 15 minutes. Form: mist<br>TWA: 10 mg/m³ 8 hours. Form: mist<br>**CA British Columbia Provincial (Canada, 6/2021).**<br>TWA: 3 mg/m³ 8 hours. Form: respirable mist<br>TWA: 10 mg/m³ 8 hours. Form: total mist |

### Biological exposure indices

None known.

# Section 8. Exposure controls/personal protection

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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

## Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

## Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

# Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

## Appearance

**Physical state** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Liquid. |
| SideStep II Neutralization Buffer | Liquid. |
| SideStep II DNase I | Liquid. |
| SideStep II DNase Digestion Buffer 10X | Liquid. |
| QPCR Normalization Primer 1 | Liquid. |
| QPCR Normalization Primer 2 | Liquid. |
| QPCR Normalization Primer 3 | Liquid. |

# Section 9. Physical and chemical properties and safety characteristics

| | | | |
|---|---|---|---|
| | | 2X Brilliant II QRT-PCR Master Mix | Liquid. |
| | | Reference Dye | Liquid. |
| | | RT/RNase Block Enzyme Mixture | Liquid. |
| **Color** | : | SideStep Lysis & Stabilization Buffer | Not available. |
| | | SideStep II Neutralization Buffer | Not available. |
| | | SideStep II DNase I | Not available. |
| | | SideStep II DNase Digestion Buffer 10X | Not available. |
| | | QPCR Normalization Primer 1 | Not available. |
| | | QPCR Normalization Primer 2 | Not available. |
| | | QPCR Normalization Primer 3 | Not available. |
| | | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | | Reference Dye | Not available. |
| | | RT/RNase Block Enzyme Mixture | Not available. |
| **Odor** | : | SideStep Lysis & Stabilization Buffer | Not available. |
| | | SideStep II Neutralization Buffer | Not available. |
| | | SideStep II DNase I | Not available. |
| | | SideStep II DNase Digestion Buffer 10X | Not available. |
| | | QPCR Normalization Primer 1 | Not available. |
| | | QPCR Normalization Primer 2 | Not available. |
| | | QPCR Normalization Primer 3 | Not available. |
| | | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | | Reference Dye | Not available. |
| | | RT/RNase Block Enzyme Mixture | Not available. |
| **Odor threshold** | : | SideStep Lysis & Stabilization Buffer | Not available. |
| | | SideStep II Neutralization Buffer | Not available. |
| | | SideStep II DNase I | Not available. |
| | | SideStep II DNase Digestion Buffer 10X | Not available. |
| | | QPCR Normalization Primer 1 | Not available. |
| | | QPCR Normalization Primer 2 | Not available. |
| | | QPCR Normalization Primer 3 | Not available. |
| | | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | | Reference Dye | Not available. |
| | | RT/RNase Block Enzyme | Not available. |

# Section 9. Physical and chemical properties and safety characteristics

| | | | |
|---|---|---|---|
| | | Mixture | |
| **pH** | : | SideStep Lysis & Stabilization Buffer | Not available. |
| | | SideStep II Neutralization Buffer | Not available. |
| | | SideStep II DNase I | 7.5 |
| | | SideStep II DNase Digestion Buffer 10X | Not available. |
| | | QPCR Normalization Primer 1 | Not available. |
| | | QPCR Normalization Primer 2 | Not available. |
| | | QPCR Normalization Primer 3 | Not available. |
| | | 2X Brilliant II QRT-PCR Master Mix | 8 |
| | | Reference Dye | 8 |
| | | RT/RNase Block Enzyme Mixture | 8 |
| **Melting point/freezing point** | : | SideStep Lysis & Stabilization Buffer | 0°C (32°F) |
| | | SideStep II Neutralization Buffer | 0°C (32°F) |
| | | SideStep II DNase I | Not available. |
| | | SideStep II DNase Digestion Buffer 10X | 0°C (32°F) |
| | | QPCR Normalization Primer 1 | 0°C (32°F) |
| | | QPCR Normalization Primer 2 | 0°C (32°F) |
| | | QPCR Normalization Primer 3 | 0°C (32°F) |
| | | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | | Reference Dye | Not available. |
| | | RT/RNase Block Enzyme Mixture | Not available. |
| **Boiling point, initial boiling point, and boiling range** | : | SideStep Lysis & Stabilization Buffer | 100°C (212°F) |
| | | SideStep II Neutralization Buffer | 100°C (212°F) |
| | | SideStep II DNase I | Not available. |
| | | SideStep II DNase Digestion Buffer 10X | 100°C (212°F) |
| | | QPCR Normalization Primer 1 | 100°C (212°F) |
| | | QPCR Normalization Primer 2 | 100°C (212°F) |
| | | QPCR Normalization Primer 3 | 100°C (212°F) |
| | | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | | Reference Dye | Not available. |
| | | RT/RNase Block Enzyme Mixture | Not available. |
| **Flash point** | : | | |

# Section 9. Physical and chemical properties and safety characteristics

| Ingredient name | Closed cup °C | Closed cup °F | Closed cup Method | Open cup °C | Open cup °F | Open cup Method |
|---|---|---|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | | | | |
| Polyoxyethylene octyl phenyl ether | 251 | 483.8 | | | | |
| **SideStep II DNase I** | | | | | | |
| Glycerol | | | | 177 | 350.6 | |
| **2X Brilliant II QRT-PCR Master Mix** | | | | | | |
| Dimethyl sulfoxide | 87 | 188.6 | ASTM D 93 | 87 | 188.6 | |
| Polyethylene glycol | 171 to 235 | 339.8 to 455 | | 199 to 238 | 390.2 to 460.4 | |
| **RT/RNase Block Enzyme Mixture** | | | | | | |
| Glycerol | | | | 177 | 350.6 | |

**Evaporation rate** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not available. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Not available. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |
| QPCR Normalization Primer 3 | Not available. |
| 2X Brilliant II QRT-PCR Master Mix | Not available. |
| Reference Dye | Not available. |
| RT/RNase Block Enzyme Mixture | Not available. |

**Flammability** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not applicable. |
| SideStep II Neutralization Buffer | Not applicable. |
| SideStep II DNase I | Not applicable. |
| SideStep II DNase Digestion Buffer 10X | Not applicable. |
| QPCR Normalization Primer 1 | Not applicable. |
| QPCR Normalization Primer 2 | Not applicable. |

# Section 9. Physical and chemical properties and safety characteristics

| | | |
|---|---|---|
| | QPCR Normalization Primer 3 | Not applicable. |
| | 2X Brilliant II QRT-PCR Master Mix | Not applicable. |
| | Reference Dye | Not applicable. |
| | RT/RNase Block Enzyme Mixture | Not applicable. |

**Lower and upper explosion limit/flammability limit** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not available. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Not available. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |
| QPCR Normalization Primer 3 | Not available. |
| 2X Brilliant II QRT-PCR Master Mix | Not available. |
| Reference Dye | Not available. |
| RT/RNase Block Enzyme Mixture | Not available. |

**Vapor pressure** :

| Ingredient name | Vapor Pressure at 20˚C | | | Vapor pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| **SideStep Lysis & Stabilization Buffer** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| Polyoxyethylene octyl phenyl ether | 0.997581 | 0.13 | | | | |
| **SideStep II Neutralization Buffer** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| **SideStep II DNase I** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| Glycerol | 0.000075 | 0.00001 | | 0.0025 | 0.00033 | |
| **SideStep II DNase Digestion Buffer 10X** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |

# Section 9. Physical and chemical properties and safety characteristics

| | | | | | | |
|---|---|---|---|---|---|---|
| **QPCR Normalization Primer 1** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| **QPCR Normalization Primer 2** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| **QPCR Normalization Primer 3** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| **2X Brilliant II QRT-PCR Master Mix** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| Dimethyl sulfoxide | 0.42 | 0.056 | EU A.4 | | | |
| **Reference Dye** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride | 0.000027 | 0.0000036 | | 0.000007501 | 0.000001 | |
| **RT/RNase Block Enzyme Mixture** | | | | | | |
| water | 23.8 | 3.2 | | 92.258 | 12.3 | |
| Glycerol | 0.000075 | 0.00001 | | 0.0025 | 0.00033 | |

**Relative vapor density** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not available. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Not available. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |
| QPCR Normalization Primer 3 | Not available. |

# Section 9. Physical and chemical properties and safety characteristics

| | | |
|---|---|---|
| | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | Reference Dye | Not available. |
| | RT/RNase Block Enzyme Mixture | Not available. |
| **Relative density** : | SideStep Lysis & Stabilization Buffer | Not available. |
| | SideStep II Neutralization Buffer | Not available. |
| | SideStep II DNase I | Not available. |
| | SideStep II DNase Digestion Buffer 10X | Not available. |
| | QPCR Normalization Primer 1 | Not available. |
| | QPCR Normalization Primer 2 | Not available. |
| | QPCR Normalization Primer 3 | Not available. |
| | 2X Brilliant II QRT-PCR Master Mix | Not available. |
| | Reference Dye | Not available. |
| | RT/RNase Block Enzyme Mixture | Not available. |

**Solubility(ies)** :

| Media | Result |
|---|---|
| **SideStep Lysis & Stabilization Buffer** | |
| water | Soluble |
| **SideStep II Neutralization Buffer** | |
| water | Soluble |
| **SideStep II DNase I** | |
| water | Soluble |
| **SideStep II DNase Digestion Buffer 10X** | |
| water | Soluble |
| **QPCR Normalization Primer 1** | |
| water | Soluble |
| **QPCR Normalization Primer 2** | |
| water | Soluble |
| **QPCR Normalization Primer 3** | |
| water | Soluble |
| **2X Brilliant II QRT-PCR Master Mix** | |
| cold water | Soluble |
| hot water | Soluble |
| **Reference Dye** | |
| water | Soluble |
| **RT/RNase Block Enzyme Mixture** | |
| water | Soluble |

# Section 9. Physical and chemical properties and safety characteristics

**Partition coefficient: n-octanol/water** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not applicable. |
| SideStep II Neutralization Buffer | Not applicable. |
| SideStep II DNase I | Not applicable. |
| SideStep II DNase Digestion Buffer 10X | Not applicable. |
| QPCR Normalization Primer 1 | Not applicable. |
| QPCR Normalization Primer 2 | Not applicable. |
| QPCR Normalization Primer 3 | Not applicable. |
| 2X Brilliant II QRT-PCR Master Mix | Not applicable. |
| Reference Dye | Not applicable. |
| RT/RNase Block Enzyme Mixture | Not applicable. |

**Auto-ignition temperature** :

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| **SideStep II DNase I** | | | |
| Glycerol | 370 | 698 | |
| **2X Brilliant II QRT-PCR Master Mix** | | | |
| Dimethyl sulfoxide | 300 to 302 | 572 to 575.6 | |
| Polyethylene glycol | 360 | 680 | |
| **RT/RNase Block Enzyme Mixture** | | | |
| Glycerol | 370 | 698 | |

**Decomposition temperature** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not available. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Not available. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |
| QPCR Normalization Primer 3 | Not available. |
| 2X Brilliant II QRT-PCR Master Mix | Not available. |
| Reference Dye | Not available. |
| RT/RNase Block Enzyme Mixture | Not available. |

# Section 9. Physical and chemical properties and safety characteristics

**Viscosity** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not available. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Not available. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |
| QPCR Normalization Primer 3 | Not available. |
| 2X Brilliant II QRT-PCR Master Mix | Not available. |
| Reference Dye | Not available. |
| RT/RNase Block Enzyme Mixture | Not available. |

**Particle characteristics**

**Median particle size** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not applicable. |
| SideStep II Neutralization Buffer | Not applicable. |
| SideStep II DNase I | Not applicable. |
| SideStep II DNase Digestion Buffer 10X | Not applicable. |
| QPCR Normalization Primer 1 | Not applicable. |
| QPCR Normalization Primer 2 | Not applicable. |
| QPCR Normalization Primer 3 | Not applicable. |
| 2X Brilliant II QRT-PCR Master Mix | Not applicable. |
| Reference Dye | Not applicable. |
| RT/RNase Block Enzyme Mixture | Not applicable. |

# Section 10. Stability and reactivity

**Reactivity** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| SideStep II Neutralization Buffer | No specific test data related to reactivity available for this product or its ingredients. |
| SideStep II DNase I | No specific test data related to reactivity available for this product or its ingredients. |
| SideStep II DNase Digestion Buffer 10X | No specific test data related to reactivity available for this product or its ingredients. |
| QPCR Normalization Primer 1 | No specific test data related to reactivity available for this product or its ingredients. |
| QPCR Normalization Primer 2 | No specific test data related to reactivity available for this product or its ingredients. |
| QPCR Normalization Primer 3 | No specific test data related to reactivity available for this product or its ingredients. |
| 2X Brilliant II QRT-PCR Master Mix | No specific test data related to reactivity available for this product or its ingredients. |
| Reference Dye | No specific test data related to reactivity available for this product or its ingredients. |
| RT/RNase Block Enzyme | No specific test data related to reactivity available for |

# Section 10. Stability and reactivity

| | | |
|---|---|---|
| | Mixture | this product or its ingredients. |
| **Chemical stability** : | SideStep Lysis & Stabilization Buffer | The product is stable. |
| | SideStep II Neutralization Buffer | The product is stable. |
| | SideStep II DNase I | The product is stable. |
| | SideStep II DNase Digestion Buffer 10X | The product is stable. |
| | QPCR Normalization Primer 1 | The product is stable. |
| | QPCR Normalization Primer 2 | The product is stable. |
| | QPCR Normalization Primer 3 | The product is stable. |
| | 2X Brilliant II QRT-PCR Master Mix | The product is stable. |
| | Reference Dye | The product is stable. |
| | RT/RNase Block Enzyme Mixture | The product is stable. |
| **Possibility of hazardous reactions** : | SideStep Lysis & Stabilization Buffer | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | SideStep II Neutralization Buffer | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | SideStep II DNase I | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | SideStep II DNase Digestion Buffer 10X | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | QPCR Normalization Primer 1 | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | QPCR Normalization Primer 2 | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | QPCR Normalization Primer 3 | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 2X Brilliant II QRT-PCR Master Mix | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Reference Dye | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | RT/RNase Block Enzyme Mixture | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** : | SideStep Lysis & Stabilization Buffer | No specific data. |
| | SideStep II Neutralization Buffer | No specific data. |
| | SideStep II DNase I | No specific data. |
| | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | QPCR Normalization Primer 1 | No specific data. |
| | QPCR Normalization Primer 2 | No specific data. |
| | QPCR Normalization Primer 3 | No specific data. |
| | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | Reference Dye | No specific data. |
| | RT/RNase Block Enzyme | No specific data. |

# Section 10. Stability and reactivity

| | | |
|---|---|---|
| | Mixture | |
| **Incompatible materials** : | SideStep Lysis & Stabilization Buffer | May react or be incompatible with oxidizing materials. |
| | SideStep II Neutralization Buffer | May react or be incompatible with oxidizing materials. |
| | SideStep II DNase I | May react or be incompatible with oxidizing materials. |
| | SideStep II DNase Digestion Buffer 10X | May react or be incompatible with oxidizing materials. |
| | QPCR Normalization Primer 1 | May react or be incompatible with oxidizing materials. |
| | QPCR Normalization Primer 2 | May react or be incompatible with oxidizing materials. |
| | QPCR Normalization Primer 3 | May react or be incompatible with oxidizing materials. |
| | 2X Brilliant II QRT-PCR Master Mix | May react or be incompatible with oxidizing materials. |
| | Reference Dye | May react or be incompatible with oxidizing materials. |
| | RT/RNase Block Enzyme Mixture | May react or be incompatible with oxidizing materials. |
| **Hazardous decomposition products** : | SideStep Lysis & Stabilization Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | SideStep II Neutralization Buffer | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | SideStep II DNase I | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | SideStep II DNase Digestion Buffer 10X | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | QPCR Normalization Primer 1 | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | QPCR Normalization Primer 2 | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | QPCR Normalization Primer 3 | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | 2X Brilliant II QRT-PCR Master Mix | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | Reference Dye | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | RT/RNase Block Enzyme Mixture | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | | |
| Polyoxyethylene octyl phenyl ether | LD50 Oral | Rat | 1800 mg/kg | - |
| **SideStep II DNase I** | | | | |
| Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |
| **2X Brilliant II QRT-PCR Master Mix** | | | | |
| Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |
| Dimethyl sulfoxide | LD50 Dermal | Rat | 40000 mg/kg | - |
| | LD50 Oral | Rat | 14500 mg/kg | - |
| Magnesium chloride | LD50 Dermal | Rat - Male, Female | >2000 mg/kg | - |
| | LD50 Oral | Rat | 2800 mg/kg | - |
| **Reference Dye** | | | | |
| Potassium chloride | LD50 Oral | Rat | 2600 mg/kg | - |
| **RT/RNase Block Enzyme Mixture** | | | | |
| Glycerol | LD50 Oral | Rat | 12600 mg/kg | - |

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | | | |
| Polyoxyethylene octyl phenyl ether | Skin - Mild irritant | Rabbit | - | 24 hours 500 uL | - |
| **SideStep II DNase I** | | | | | |
| Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| **2X Brilliant II QRT-PCR Master Mix** | | | | | |
| Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| Polyethylene glycol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| Dimethyl sulfoxide | Eyes - Mild irritant | Rabbit | - | 100 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 100 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 | - |

# Section 11. Toxicological information

| | | | | | |
|---|---|---|---|---|---|
| | | | | mg | |
| **Reference Dye** | | | | | |
| Potassium chloride | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| **RT/RNase Block Enzyme Mixture** | | | | | |
| Glycerol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |

**Sensitization**

Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

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

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |
| QPCR Normalization Primer 3 | Not available. |
| 2X Brilliant II QRT-PCR Master Mix | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| Reference Dye | Not available. |
| RT/RNase Block Enzyme Mixture | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |

**Potential acute health effects**

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| **Eye contact** | : | SideStep Lysis & Stabilization Buffer | Causes serious eye irritation. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | Causes eye irritation. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | Causes eye irritation. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | Causes eye irritation. |
| **Inhalation** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |
| **Skin contact** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| **Ingestion** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |

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

| | | | |
|---|---|---|---|
| **Eye contact** | : | SideStep Lysis & Stabilization Buffer | Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| | | SideStep II Neutralization Buffer | No specific data. |
| | | SideStep II DNase I | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| | | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | | QPCR Normalization Primer 1 | No specific data. |
| | | QPCR Normalization Primer 2 | No specific data. |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| **Inhalation** | : | SideStep Lysis & Stabilization Buffer | No specific data. |
| | | SideStep II Neutralization Buffer | No specific data. |
| | | SideStep II DNase I | No specific data. |
| | | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | | QPCR Normalization Primer 1 | No specific data. |

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| | | QPCR Normalization Primer 2 | No specific data. |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | No specific data. |
| **Skin contact** | : | SideStep Lysis & Stabilization Buffer | No specific data. |
| | | SideStep II Neutralization Buffer | No specific data. |
| | | SideStep II DNase I | No specific data. |
| | | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | | QPCR Normalization Primer 1 | No specific data. |
| | | QPCR Normalization Primer 2 | No specific data. |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | No specific data. |
| **Ingestion** | : | SideStep Lysis & Stabilization Buffer | No specific data. |
| | | SideStep II Neutralization Buffer | No specific data. |
| | | SideStep II DNase I | No specific data. |
| | | SideStep II DNase Digestion Buffer 10X | No specific data. |
| | | QPCR Normalization Primer 1 | No specific data. |
| | | QPCR Normalization Primer 2 | No specific data. |
| | | QPCR Normalization Primer 3 | No specific data. |
| | | 2X Brilliant II QRT-PCR Master Mix | No specific data. |
| | | Reference Dye | No specific data. |
| | | RT/RNase Block Enzyme Mixture | 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

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| **General** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |
| **Carcinogenicity** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |
| **Mutagenicity** | : | SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| | | SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| | | SideStep II DNase I | No known significant effects or critical hazards. |
| | | SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| | | QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| | | 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| | | Reference Dye | No known significant effects or critical hazards. |
| | | RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |

# Section 11. Toxicological information

**Reproductive toxicity** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | No known significant effects or critical hazards. |
| SideStep II Neutralization Buffer | No known significant effects or critical hazards. |
| SideStep II DNase I | No known significant effects or critical hazards. |
| SideStep II DNase Digestion Buffer 10X | No known significant effects or critical hazards. |
| QPCR Normalization Primer 1 | No known significant effects or critical hazards. |
| QPCR Normalization Primer 2 | No known significant effects or critical hazards. |
| QPCR Normalization Primer 3 | No known significant effects or critical hazards. |
| 2X Brilliant II QRT-PCR Master Mix | No known significant effects or critical hazards. |
| Reference Dye | No known significant effects or critical hazards. |
| RT/RNase Block Enzyme Mixture | No known significant effects or critical hazards. |

## Numerical measures of toxicity

### Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | | | |
| SideStep Lysis & Stabilization Buffer | 180000.0 | N/A | N/A | N/A | N/A |
| Polyoxyethylene octyl phenyl ether | 1800 | N/A | N/A | N/A | N/A |
| **SideStep II DNase I** | | | | | |
| Glycerol | 12600 | N/A | N/A | N/A | N/A |
| **2X Brilliant II QRT-PCR Master Mix** | | | | | |
| Glycerol | 12600 | N/A | N/A | N/A | N/A |
| Polyethylene glycol | 28000 | N/A | N/A | N/A | N/A |
| Dimethyl sulfoxide | 14500 | 40000 | N/A | N/A | N/A |
| Magnesium chloride | 2800 | 2500 | N/A | N/A | N/A |
| **Reference Dye** | | | | | |
| Reference Dye | 70270.3 | N/A | N/A | N/A | N/A |
| Potassium chloride | 2600 | N/A | N/A | N/A | N/A |
| **RT/RNase Block Enzyme Mixture** | | | | | |
| Glycerol | 12600 | N/A | N/A | N/A | N/A |

**Other information** :

| | |
|---|---|
| SideStep Lysis & Stabilization Buffer | Not available. |
| SideStep II Neutralization Buffer | Not available. |
| SideStep II DNase I | Not available. |
| SideStep II DNase Digestion Buffer 10X | Not available. |
| QPCR Normalization Primer 1 | Not available. |
| QPCR Normalization Primer 2 | Not available. |

# Section 11. Toxicological information

| | |
|---|---|
| QPCR Normalization Primer 3 | Not available. |
| 2X Brilliant II QRT-PCR Master Mix | Not available. |
| Reference Dye | Not available. |
| RT/RNase Block Enzyme Mixture | Adverse symptoms may include the following: May cause skin sensitization. |

# Section 12. Ecological information

## Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | |
| Polyoxyethylene octyl phenyl ether | Acute LC50 5.85 mg/l Fresh water | Crustaceans - Ceriodaphnia rigaudi - Neonate | 48 hours |
| | Acute LC50 11.2 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 4500 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| **SideStep II DNase I** | | | |
| Glycerol | Acute LC50 54000 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| **2X Brilliant II QRT-PCR Master Mix** | | | |
| Glycerol | Acute LC50 54000 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| Polyethylene glycol | Acute LC50 >1000000 µg/l Fresh water | Fish - Salmo salar - Parr | 96 hours |
| Dimethyl sulfoxide | Acute LC50 25000 ppm Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 34000000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Chronic NOEC 100 ul/L Marine water | Algae - Ulva lactuca | 72 hours |
| | Chronic NOEC 100 ul/L Fresh water | Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) | 21 days |
| Magnesium chloride | Acute EC50 >100 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |
| | Acute EC50 180000 µg/l Fresh water | Crustaceans - Eudiaptomus padanus ssp. padanus - Adult | 48 hours |
| | Acute IC50 6.8 mg/l Fresh water | Aquatic plants - Lemna aequinoctialis | 96 hours |
| | Acute LC50 32000 µg/l Fresh water | Daphnia - Daphnia hyalina - Adult | 48 hours |
| | Acute LC50 2120 mg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| | Acute NOEC 100 mg/l Fresh water | Algae - Desmodesmus subspicatus | 72 hours |
| | Chronic NOEC 0.1 mg/l Fresh water | Fish - Cyprinus carpio | 35 days |
| **Reference Dye** | | | |
| Potassium chloride | Acute EC50 9.24 g/L Fresh water | Algae - Desmodesmus subspicatus | 72 hours |
| | Acute EC50 1337000 µg/l Fresh water | Algae - Navicula seminulum | 96 hours |
| | Acute EC50 83000 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 9.68 mg/l Fresh water | Crustaceans - Pseudosida ramosa - Neonate | 48 hours |
| | Acute LC50 509.65 mg/l Fresh water | Fish - Danio rerio | 96 hours |
| **RT/RNase Block Enzyme Mixture** | | | |
| Glycerol | Acute LC50 54000 mg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |

# Section 12. Ecological information

## Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|---|---|---|---|---|
| **SideStep II DNase I** | | | | |
| Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |
| **2X Brilliant II QRT-PCR Master Mix** | | | | |
| Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |
| Polyethylene glycol | OECD 301D Ready Biodegradability - Closed Bottle Test | 74.85 % - Readily - 28 days | 4 mg/l | - |
| Dimethyl sulfoxide | OECD 301D Ready Biodegradability - Closed Bottle Test | 31 % - Not readily - 28 days | - | - |
| **RT/RNase Block Enzyme Mixture** | | | | |
| Glycerol | 301D Ready Biodegradability - Closed Bottle Test | 93 % - 30 days | - | - |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | |
| Polyoxyethylene octyl phenyl ether | - | - | Readily |
| **2X Brilliant II QRT-PCR Master Mix** | | | |
| Polyethylene glycol | - | - | Readily |
| Dimethyl sulfoxide | - | - | Not readily |
| **Reference Dye** | | | |
| Potassium chloride | - | - | Readily |

## Bioaccumulative potential

# Section 12. Ecological information

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| **SideStep Lysis & Stabilization Buffer** | | | |
| Polyoxyethylene octyl phenyl ether | 4.86 | - | high |
| **SideStep II DNase I** | | | |
| Glycerol | -1.76 | - | low |
| **2X Brilliant II QRT-PCR Master Mix** | | | |
| Glycerol | -1.76 | - | low |
| Polyethylene glycol | - | 3.2 | low |
| Dimethyl sulfoxide | -1.35 | 3.16 | low |
| **Reference Dye** | | | |
| Potassium chloride | -0.46 | - | low |
| **RT/RNase Block Enzyme Mixture** | | | |
| Glycerol | -1.76 | - | low |

**Mobility in soil**

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

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

# Section 13. Disposal considerations

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

# Section 14. Transport information

**TDG / IMDG / IATA** : Not regulated.

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

**Transport in bulk according to IMO instruments** : Not available.

# Section 15. Regulatory information

## Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

## International regulations

### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Inventory list

**Australia** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Eurasian Economic Union** : **Russian Federation inventory**: All components are listed or exempted.

**Japan** : **Japan inventory (CSCL)**: Not determined.
**Japan inventory (ISHL)**: Not determined.

**New Zealand** : Not determined.

**Philippines** : Not determined.

**Republic of Korea** : Not determined.

**Taiwan** : Not determined.

**Thailand** : Not determined.

**Turkey** : Not determined.

**United States** : Not determined.

**Viet Nam** : Not determined.

# Section 16. Other information

## History

**Date of issue/Date of revision** : 11/23/2022

**Date of previous issue** : 05/07/2020

**Version** : 7

**Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available

# Section 16. Other information

UN = United Nations

**Procedure used to derive the classification**

| Classification | Justification |
|---|---|
| **SideStep Lysis & Stabilization Buffer** | |
| EYE IRRITATION - Category 2A | Calculation method |
| AQUATIC HAZARD (LONG-TERM) - Category 3 | Calculation method |
| **SideStep II DNase I** | |
| EYE IRRITATION - Category 2B | Calculation method |
| **2X Brilliant II QRT-PCR Master Mix** | |
| EYE IRRITATION - Category 2B | Calculation method |
| **RT/RNase Block Enzyme Mixture** | |
| EYE IRRITATION - Category 2B | Calculation method |

**Indicates information that has changed from previously issued version.**

**Notice to reader**

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