

# SAFETY DATA SHEET

ClearSeq HS Target Enrichment Kits - ION - 48 reactions

## Section 1. Identification

### 1.1 Product identifier

<b>Product name</b>	: ClearSeq HS Target Enrichment Kits - ION - 48 reactions
<b>Part No. (Chemical Kit)</b>	: 5190-9172, 5190-9174, 5190-9176, 5190-9178
<b>Part No.</b>	: RE Buffer 5190-7952
	BSA Solution 5190-7953
	Enrichment Control DNA 5190-7956
	Hybridization Solution 5190-7957
	HS Hybridization Stop Solution 5190-7958
	10 mM rATP 5190-7959
	HS Ligation Solution 5190-7960
	HS DNA Ligase 5190-7961
	HS Capture Solution 5190-7962
	HS Wash 1 Solution 5190-7963
	HS Wash 2 Solution 5190-7964
	Primer 1 ION 5190-7811
	Primer 2 ION 5190-7812
	HS Elution Buffer 5190-7967
	Herculase II Fusion DNA Polymerase 5190-7968
	Herculase II Reaction Buffer 5190-7969
	100 mM dNTP Mix 5190-7970
	HaloPlex HS ION Indexing Plate 5190-8834
	Enzyme Strip 1 5190-7954
	Enzyme Strip 2 5190-7955
	ClearSeq Probe HS ION 5190-9171 / 5190-9173 / 5190-9175 / 5190-9177

**Validation date** : 8/9/2017

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

<b>Material uses</b>	: Analytical reagent.
	<input checked="" type="checkbox"/> RE Buffer 1.7 ml (48 reactions)
	BSA Solution 0.04 ml (48 reactions)
	Enrichment Control DNA 0.31 ml (48 reactions)
	Hybridization Solution 2.5 ml (48 reactions)
	HS Hybridization Stop Solution 1.9 ml (48 reactions)
	10 mM rATP 0.02 ml (48 reactions)
	HS Ligation Solution 0.72 ml (48 reactions)
	HS DNA Ligase 0.18 ml (48 reactions)
	HS Capture Solution 2.7 ml (48 reactions)
	HS Wash 1 Solution 6.7 ml (48 reactions)
	HS Wash 2 Solution 10.8 ml (48 reactions)
	Primer 1 ION 0.29 ml (48 reactions)
	Primer 2 ION 0.58 ml (48 reactions)
	HS Elution Buffer 15 ml (48 reactions)
	Herculase II Fusion DNA Polymerase 0.29 ml (48 reactions)
	Herculase II Reaction Buffer 2.2 ml (48 reactions)
	100 mM dNTP Mix 0.06 ml (48 reactions)
	HaloPlex HS ION Indexing Plate 48 x 0.015 ml (48 reactions)
	Enzyme Strip 1 0.2 ml (48 reactions)
	Enzyme Strip 2 0.2 ml (48 reactions)
	ClearSeq Probe HS ION 0.357 ml (48 reactions)

### 1.3 Details of the supplier of the safety data sheet

## Section 1. Identification

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

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

<b>OSHA/HCS status</b>	: RE Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	BSA Solution	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	Enrichment Control DNA	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	Hybridization Solution	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	HS Hybridization Stop Solution 10 mM rATP	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	HS Ligation Solution	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	HS DNA Ligase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	HS Capture Solution	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	HS Wash 1 Solution	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	HS Wash 2 Solution	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.

## Section 2. Hazards identification

	1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Primer 1 ION	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Primer 2 ION	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
HS Elution Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Herculase II Fusion DNA Polymerase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Herculase II Reaction Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
100 mM dNTP Mix	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
HaloPlex HS ION Indexing Plate	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Enzyme Strip 1	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Enzyme Strip 2	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
ClearSeq Probe HS ION	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

### Classification of the substance or mixture

## Section 2. Hazards identification

### Hybridization Solution

H319 EYE IRRITATION - Category 2A  
H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

### HS Hybridization Stop Solution

H320 EYE IRRITATION - Category 2B

### HS DNA Ligase

H320 EYE IRRITATION - Category 2B

### HS Capture Solution

H319 EYE IRRITATION - Category 2A

### Herculase II Fusion DNA

#### Polymerase

H320 EYE IRRITATION - Category 2B

### Enzyme Strip 1

H320 EYE IRRITATION - Category 2B

### Enzyme Strip 2

H320 EYE IRRITATION - Category 2B

#### Ingredients of unknown toxicity

RE Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
BSA Solution	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
Hybridization Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
HS Hybridization Stop Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
HS Ligation Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
HS DNA Ligase	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
HS Capture Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Herculase II Fusion DNA Polymerase	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
Herculase II Reaction Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
100 mM dNTP Mix	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
Enzyme Strip 1	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
Enzyme Strip 2	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%

## Section 2. Hazards identification

### 2.2 GHS label elements

#### Hazard pictograms

: Hybridization Solution



HS Capture Solution



#### Signal word

: RE Buffer BSA Solution Enrichment Control DNA Hybridization Solution HS Hybridization Stop Solution 10 mM rATP HS Ligation Solution HS DNA Ligase HS Capture Solution HS Wash 1 Solution HS Wash 2 Solution Primer 1 ION Primer 2 ION HS Elution Buffer Herculase II Fusion DNA Polymerase Herculase II Reaction Buffer 100 mM dNTP Mix HaloPlex HS ION Indexing Plate Enzyme Strip 1 Enzyme Strip 2 ClearSeq Probe HS ION	No signal word. No signal word. No signal word. Danger Warning No signal word. No signal word. Warning Warning No signal word. No signal word. No signal word. No signal word. No signal word. No signal word. No signal word. Warning No signal word. No signal word. No signal word. Warning Warning No signal word.
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#### Hazard statements

: RE Buffer BSA Solution Enrichment Control DNA Hybridization Solution  HS Hybridization Stop Solution 10 mM rATP HS Ligation Solution HS DNA Ligase HS Capture Solution HS Wash 1 Solution HS Wash 2 Solution Primer 1 ION Primer 2 ION HS Elution Buffer Herculase II Fusion DNA Polymerase Herculase II Reaction Buffer 100 mM dNTP Mix HaloPlex HS ION Indexing Plate Enzyme Strip 1 Enzyme Strip 2 ClearSeq Probe HS ION	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H319 - Causes serious eye irritation. H360 - May damage the unborn child. H320 - Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation. H319 - Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation.  No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation. H320 - Causes eye irritation. No known significant effects or critical hazards.
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#### Precautionary statements

## Section 2. Hazards identification

### Prevention

<ul style="list-style-type: none"> <li>: RE Buffer</li> <li>BSA Solution</li> <li>Enrichment Control DNA</li> <li>Hybridization Solution</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>P201 - Obtain special instructions before use.</li> <li>P202 - Do not handle until all safety precautions have been read and understood.</li> <li>P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.</li> <li>P264 - Wash hands thoroughly after handling.</li> <li>P264 - Wash hands thoroughly after handling.</li> </ul>
<ul style="list-style-type: none"> <li>HS Hybridization Stop Solution</li> <li>10 mM rATP</li> <li>HS Ligation Solution</li> <li>HS DNA Ligase</li> <li>HS Capture Solution</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>P264 - Wash hands thoroughly after handling.</li> <li>P280 - Wear eye or face protection.</li> <li>P264 - Wash hands thoroughly after handling.</li> </ul>
<ul style="list-style-type: none"> <li>HS Wash 1 Solution</li> <li>HS Wash 2 Solution</li> <li>Primer 1 ION</li> <li>Primer 2 ION</li> <li>HS Elution Buffer</li> <li>Herculase II Fusion DNA Polymerase</li> <li>Herculase II Reaction Buffer</li> <li>100 mM dNTP Mix</li> <li>HaloPlex HS ION Indexing Plate</li> <li>Enzyme Strip 1</li> <li>Enzyme Strip 2</li> <li>ClearSeq Probe HS ION</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>P264 - Wash hands thoroughly after handling.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>P264 - Wash hands thoroughly after handling.</li> <li>P264 - Wash hands thoroughly after handling.</li> <li>Not applicable.</li> </ul>

### Response

<ul style="list-style-type: none"> <li>: RE Buffer</li> <li>BSA Solution</li> <li>Enrichment Control DNA</li> <li>Hybridization Solution</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>Not applicable.</li> <li>P308 + P313 - IF exposed or concerned: Get medical attention.</li> <li>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337 + P313 - If eye irritation persists: Get medical attention.</li> </ul>
<ul style="list-style-type: none"> <li>HS Hybridization Stop Solution</li> </ul>	<ul style="list-style-type: none"> <li>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337 + P313 - If eye irritation persists: Get medical attention.</li> </ul>
<ul style="list-style-type: none"> <li>10 mM rATP</li> <li>HS Ligation Solution</li> <li>HS DNA Ligase</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> <li>Not applicable.</li> <li>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337 + P313 - If eye irritation persists: Get medical attention.</li> </ul>
<ul style="list-style-type: none"> <li>HS Capture Solution</li> </ul>	<ul style="list-style-type: none"> <li>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P337 + P313 - If eye irritation persists: Get medical attention.</li> </ul>



## Section 2. Hazards identification

	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	Enzyme Strip 2	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	ClearSeq Probe HS ION	Not applicable.
<b>Storage</b>	: RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	P405 - Store locked up.
	HS Hybridization Stop Solution	Not applicable.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.
	HS Capture Solution	Not applicable.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
	ClearSeq Probe HS ION	Not applicable.
<b>Disposal</b>	: RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	HS Hybridization Stop Solution	Not applicable.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.

## Section 2. Hazards identification

	HS Capture Solution	Not applicable.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
	ClearSeq Probe HS ION	Not applicable.
<b>Supplemental label elements</b>	: RE Buffer	None known.
	BSA Solution	None known.
	Enrichment Control DNA	None known.
	Hybridization Solution	None known.
	HS Hybridization Stop Solution	None known.
	10 mM rATP	None known.
	HS Ligation Solution	None known.
	HS DNA Ligase	None known.
	HS Capture Solution	None known.
	HS Wash 1 Solution	None known.
	HS Wash 2 Solution	None known.
	Primer 1 ION	None known.
	Primer 2 ION	None known.
	HS Elution Buffer	None known.
	Herculase II Fusion DNA Polymerase	None known.
	Herculase II Reaction Buffer	None known.
	100 mM dNTP Mix	None known.
	HaloPlex HS ION Indexing Plate	None known.
	Enzyme Strip 1	None known.
	Enzyme Strip 2	None known.
	ClearSeq Probe HS ION	None known.

### 2.3 Other hazards

#### Hazards not otherwise classified

: RE Buffer	None known.
BSA Solution	None known.
Enrichment Control DNA	None known.
Hybridization Solution	None known.
HS Hybridization Stop Solution	None known.
10 mM rATP	None known.
HS Ligation Solution	None known.
HS DNA Ligase	None known.
HS Capture Solution	None known.
HS Wash 1 Solution	None known.
HS Wash 2 Solution	None known.
Primer 1 ION	None known.
Primer 2 ION	None known.
HS Elution Buffer	None known.
Herculase II Fusion DNA Polymerase	None known.
Herculase II Reaction Buffer	None known.
100 mM dNTP Mix	None known.
HaloPlex HS ION Indexing Plate	None known.
Enzyme Strip 1	None known.
Enzyme Strip 2	None known.
ClearSeq Probe HS ION	None known.



## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	:	RE Buffer	Mixture
		BSA Solution	Mixture
		Enrichment Control DNA	Mixture
		Hybridization Solution	Mixture
		HS Hybridization Stop Solution	Mixture
		10 mM rATP	Mixture
		HS Ligation Solution	Mixture
		HS DNA Ligase	Mixture
		HS Capture Solution	Mixture
		HS Wash 1 Solution	Mixture
		HS Wash 2 Solution	Mixture
		Primer 1 ION	Mixture
		Primer 2 ION	Mixture
		HS Elution Buffer	Mixture
		Herculase II Fusion DNA Polymerase	Mixture
		Herculase II Reaction Buffer	Mixture
		100 mM dNTP Mix	Mixture
		HaloPlex HS ION Indexing Plate	Mixture
		Enzyme Strip 1	Mixture
		Enzyme Strip 2	Mixture
		ClearSeq Probe HS ION	Mixture

Ingredient name	%	CAS number
<b>RE Buffer</b> potassium acetate	≤3	127-08-2
<b>BSA Solution</b> Glycerol	<10	56-81-5
<b>Hybridization Solution</b> Formamide Sodium chloride	≥25 - ≤50 ≥10 - ≤25	75-12-7 7647-14-5
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	≥25 - ≤50	25322-68-3
<b>HS Ligation Solution</b> Sodium chloride	≤3	7647-14-5
<b>HS DNA Ligase</b> Glycerol	≥50 - ≤75	56-81-5
<b>HS Capture Solution</b> Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate Sodium chloride	<10 ≤3	6381-92-6 7647-14-5
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	≥50 - ≤75	56-81-5
<b>Herculase II Reaction Buffer</b> Ammonium sulphate Trometamol	≤3 ≤3	7783-20-2 77-86-1
<b>100 mM dNTP Mix</b> 2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate) 2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	≤3 ≤3	2564-35-4 1927-31-7

## Section 3. Composition/information on ingredients

<b>Enzyme Strip 1</b> Glycerol	≥50 - ≤75	56-81-5
<b>Enzyme Strip 2</b> Glycerol	≥50 - ≤75	56-81-5

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

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

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

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	: RE 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.
	BSA Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Enrichment Control DNA	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.
	Hybridization Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	HS Hybridization Stop Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	10 mM rATP	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.
	HS Ligation Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	HS DNA Ligase	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.
	HS Capture Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	HS Wash 1 Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

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HS Wash 2 Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Primer 1 ION	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.
Primer 2 ION	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.
HS Elution Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction 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.
100 mM dNTP Mix	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.
HaloPlex HS ION Indexing Plate	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.
Enzyme Strip 1	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.
Enzyme Strip 2	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
ClearSeq Probe HS ION	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b> : RE Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
BSA Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Enrichment Control DNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Hybridization Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory

## Section 4. First aid measures

	<p>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 unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.</p>
HS Hybridization Stop Solution	<p>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.</p>
10 mM rATP	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</p>
HS Ligation Solution	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</p>
HS DNA Ligase	<p>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.</p>
HS Capture Solution	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.</p>
HS Wash 1 Solution	<p>Remove victim to fresh air and keep at rest in a</p>

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HS Wash 2 Solution	position comfortable for breathing. Get medical attention if symptoms occur.
Primer 1 ION	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Primer 2 ION	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HS Elution Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction Buffer	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.
100 mM dNTP Mix	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.
HaloPlex HS ION Indexing Plate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Enzyme Strip 1	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.
Enzyme Strip 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or

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### Skin contact

ClearSeq Probe HS ION	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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
: RE Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
BSA Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Enrichment Control DNA	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Hybridization Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
HS Hybridization Stop Solution	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.
10 mM rATP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
HS Ligation Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
HS DNA Ligase	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.
HS Capture Solution	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.
HS Wash 1 Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
HS Wash 2 Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Primer 1 ION	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Primer 2 ION	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get



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HS Elution Buffer	medical attention if symptoms occur. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
100 mM dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
HaloPlex HS ION Indexing Plate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Enzyme Strip 1	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.
Enzyme Strip 2	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.
ClearSeq Probe HS ION	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b> : RE Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
BSA Solution	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Enrichment Control DNA	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Hybridization Solution	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless

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

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	<p>Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
HS Wash 1 Solution	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
HS Wash 2 Solution	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Primer 1 ION	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Primer 2 ION	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
HS Elution Buffer	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Herculase II Fusion DNA Polymerase	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get</p>

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Herculase II Reaction Buffer	<p>medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p> <p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
100 mM dNTP Mix	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
HaloPlex HS ION Indexing Plate	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Enzyme Strip 1	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Enzyme Strip 2	<p>Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
ClearSeq Probe HS ION	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and</p>

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the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

#### Potential acute health effects

##### Eye contact

: RE Buffer	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Hybridization Solution	Causes serious eye irritation.
HS Hybridization Stop Solution	Causes eye irritation.
10 mM rATP	No known significant effects or critical hazards.
HS Ligation Solution	No known significant effects or critical hazards.
HS DNA Ligase	Causes eye irritation.
HS Capture Solution	Causes serious eye irritation.
HS Wash 1 Solution	No known significant effects or critical hazards.
HS Wash 2 Solution	No known significant effects or critical hazards.
Primer 1 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	Causes eye irritation.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	Causes eye irritation.
Enzyme Strip 2	Causes eye irritation.
ClearSeq Probe HS ION	No known significant effects or critical hazards.

##### Inhalation

: RE Buffer	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Hybridization Solution	No known significant effects or critical hazards.
HS Hybridization Stop Solution	No known significant effects or critical hazards.
10 mM rATP	No known significant effects or critical hazards.
HS Ligation Solution	No known significant effects or critical hazards.
HS DNA Ligase	No known significant effects or critical hazards.
HS Capture Solution	No known significant effects or critical hazards.
HS Wash 1 Solution	No known significant effects or critical hazards.
HS Wash 2 Solution	No known significant effects or critical hazards.
Primer 1 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
ClearSeq Probe HS ION	No known significant effects or critical hazards.

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<b>Skin contact</b>	: RE Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	HS Hybridization Stop Solution	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	HS Ligation Solution	No known significant effects or critical hazards.
	HS DNA Ligase	No known significant effects or critical hazards.
	HS Capture Solution	No known significant effects or critical hazards.
	HS Wash 1 Solution	No known significant effects or critical hazards.
	HS Wash 2 Solution	No known significant effects or critical hazards.
	Primer 1 ION	No known significant effects or critical hazards.
	Primer 2 ION	No known significant effects or critical hazards.
	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
ClearSeq Probe HS ION	No known significant effects or critical hazards.	
<b>Ingestion</b>	: RE Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	HS Hybridization Stop Solution	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	HS Ligation Solution	No known significant effects or critical hazards.
	HS DNA Ligase	No known significant effects or critical hazards.
	HS Capture Solution	No known significant effects or critical hazards.
	HS Wash 1 Solution	No known significant effects or critical hazards.
	HS Wash 2 Solution	No known significant effects or critical hazards.
	Primer 1 ION	No known significant effects or critical hazards.
	Primer 2 ION	No known significant effects or critical hazards.
	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
ClearSeq Probe HS ION	No known significant effects or critical hazards.	

### Over-exposure signs/symptoms

<b>Eye contact</b>	: RE Buffer	No specific data.
	BSA Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: pain or irritation watering redness
	HS Hybridization Stop Solution	Adverse symptoms may include the following: irritation watering redness
	10 mM rATP	No specific data.
	HS Ligation Solution	No specific data.



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	HS DNA Ligase	Adverse symptoms may include the following: irritation watering redness
	HS Capture Solution	Adverse symptoms may include the following: pain or irritation watering redness
	HS Wash 1 Solution	No specific data.
	HS Wash 2 Solution	No specific data.
	Primer 1 ION	No specific data.
	Primer 2 ION	No specific data.
	HS Elution Buffer	No specific data.
	Herculase II Fusion DNA Polymerase	Adverse symptoms may include the following:  irritation watering redness
	Herculase II Reaction Buffer	No specific data.
	100 mM dNTP Mix	No specific data.
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	Adverse symptoms may include the following: irritation watering redness
	Enzyme Strip 2	Adverse symptoms may include the following: irritation watering redness
	ClearSeq Probe HS ION	No specific data.
<b>Inhalation</b>	: RE Buffer	No specific data.
	BSA Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	HS Hybridization Stop Solution	No specific data.
	10 mM rATP	No specific data.
	HS Ligation Solution	No specific data.
	HS DNA Ligase	No specific data.
	HS Capture Solution	No specific data.
	HS Wash 1 Solution	No specific data.
	HS Wash 2 Solution	No specific data.
	Primer 1 ION	No specific data.
	Primer 2 ION	No specific data.
	HS Elution Buffer	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	Herculase II Reaction Buffer	No specific data.
	100 mM dNTP Mix	No specific data.
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	ClearSeq Probe HS ION	No specific data.

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### Skin contact

: RE Buffer	No specific data.
BSA Solution	No specific data.
Enrichment Control DNA	No specific data.
Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
HS Hybridization Stop Solution	No specific data.
10 mM rATP	No specific data.
HS Ligation Solution	No specific data.
HS DNA Ligase	No specific data.
HS Capture Solution	No specific data.
HS Wash 1 Solution	No specific data.
HS Wash 2 Solution	No specific data.
Primer 1 ION	No specific data.
Primer 2 ION	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA Polymerase	No specific data.
Herculase II Reaction Buffer	No specific data.
100 mM dNTP Mix	No specific data.
HaloPlex HS ION Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
ClearSeq Probe HS ION	No specific data.

### Ingestion

: RE Buffer	No specific data.
BSA Solution	No specific data.
Enrichment Control DNA	No specific data.
Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
HS Hybridization Stop Solution	No specific data.
10 mM rATP	No specific data.
HS Ligation Solution	No specific data.
HS DNA Ligase	No specific data.
HS Capture Solution	No specific data.
HS Wash 1 Solution	No specific data.
HS Wash 2 Solution	No specific data.
Primer 1 ION	No specific data.
Primer 2 ION	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA Polymerase	No specific data.
Herculase II Reaction Buffer	No specific data.
100 mM dNTP Mix	No specific data.
HaloPlex HS ION Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
ClearSeq Probe HS ION	No specific data.

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

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<b>Notes to physician</b>	: RE Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	BSA Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enrichment Control DNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Hybridization Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	HS Hybridization Stop Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10 mM rATP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HS Ligation Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HS DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HS Capture Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	HS Wash 1 Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HS Wash 2 Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Primer 1 ION	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Primer 2 ION	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HS Elution Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Herculase II Fusion DNA Polymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Herculase II Reaction Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	100 mM dNTP Mix	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.
	HaloPlex HS ION Indexing Plate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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specialist immediately if large quantities have been ingested or inhaled.

Enzyme Strip 2

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

ClearSeq Probe HS ION

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

### Specific treatments

: RE Buffer	No specific treatment.
BSA Solution	No specific treatment.
Enrichment Control DNA	No specific treatment.
Hybridization Solution	No specific treatment.
HS Hybridization Stop Solution	No specific treatment.
10 mM rATP	No specific treatment.
HS Ligation Solution	No specific treatment.
HS DNA Ligase	No specific treatment.
HS Capture Solution	No specific treatment.
HS Wash 1 Solution	No specific treatment.
HS Wash 2 Solution	No specific treatment.
Primer 1 ION	No specific treatment.
Primer 2 ION	No specific treatment.
HS Elution Buffer	No specific treatment.
Herculase II Fusion DNA Polymerase	No specific treatment.
Herculase II Reaction Buffer	No specific treatment.
100 mM dNTP Mix	No specific treatment.
HaloPlex HS ION Indexing Plate	No specific treatment.
Enzyme Strip 1	No specific treatment.
Enzyme Strip 2	No specific treatment.
ClearSeq Probe HS ION	No specific treatment.

### Protection of first-aiders

: RE Buffer	No action shall be taken involving any personal risk or without suitable training.
BSA Solution	No action shall be taken involving any personal risk or without suitable training.
Enrichment Control DNA	No action shall be taken involving any personal risk or without suitable training.
Hybridization Solution	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
HS Hybridization Stop Solution	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.
10 mM rATP	No action shall be taken involving any personal risk or without suitable training.
HS Ligation Solution	No action shall be taken involving any personal risk or without suitable training.
HS DNA Ligase	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.
HS Capture Solution	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to

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HS Wash 1 Solution	the person providing aid to give mouth-to-mouth resuscitation.
HS Wash 2 Solution	No action shall be taken involving any personal risk or without suitable training.
Primer 1 ION	No action shall be taken involving any personal risk or without suitable training.
Primer 2 ION	No action shall be taken involving any personal risk or without suitable training.
HS Elution Buffer	No action shall be taken involving any personal risk or without suitable training.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
100 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
HaloPlex HS ION Indexing Plate	No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 1	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.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
ClearSeq Probe HS ION	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: RE Buffer	Use an extinguishing agent suitable for the surrounding fire.
	BSA Solution	Use an extinguishing agent suitable for the surrounding fire.
	Enrichment Control DNA	Use an extinguishing agent suitable for the surrounding fire.
	Hybridization Solution	Use an extinguishing agent suitable for the surrounding fire.
	HS Hybridization Stop Solution	Use an extinguishing agent suitable for the surrounding fire.
	10 mM rATP	Use an extinguishing agent suitable for the surrounding fire.
	HS Ligation Solution	Use an extinguishing agent suitable for the surrounding fire.
	HS DNA Ligase	Use an extinguishing agent suitable for the surrounding fire.
	HS Capture Solution	Use an extinguishing agent suitable for the surrounding fire.
	HS Wash 1 Solution	Use an extinguishing agent suitable for the surrounding fire.
	HS Wash 2 Solution	Use an extinguishing agent suitable for the

## Section 5. Fire-fighting measures

Primer 1 ION		surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
Primer 2 ION		Use an extinguishing agent suitable for the surrounding fire.
HS Elution Buffer		Use an extinguishing agent suitable for the surrounding fire.
Herculase II Fusion DNA Polymerase		Use an extinguishing agent suitable for the surrounding fire.
Herculase II Reaction Buffer		Use an extinguishing agent suitable for the surrounding fire.
100 mM dNTP Mix		Use an extinguishing agent suitable for the surrounding fire.
HaloPlex HS ION Indexing Plate		Use an extinguishing agent suitable for the surrounding fire.
Enzyme Strip 1		Use an extinguishing agent suitable for the surrounding fire.
Enzyme Strip 2		Use an extinguishing agent suitable for the surrounding fire.
ClearSeq Probe HS ION		Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: RE Buffer	None known.
	BSA Solution	None known.
	Enrichment Control DNA	None known.
	Hybridization Solution	None known.
	HS Hybridization Stop Solution	None known.
	10 mM rATP	None known.
	HS Ligation Solution	None known.
	HS DNA Ligase	None known.
	HS Capture Solution	None known.
	HS Wash 1 Solution	None known.
	HS Wash 2 Solution	None known.
	Primer 1 ION	None known.
	Primer 2 ION	None known.
	HS Elution Buffer	None known.
	Herculase II Fusion DNA Polymerase	None known.
	Herculase II Reaction Buffer	None known.
	100 mM dNTP Mix	None known.
	HaloPlex HS ION Indexing Plate	None known.
	Enzyme Strip 1	None known.
	Enzyme Strip 2	None known.
	ClearSeq Probe HS ION	None known.

### 5.2 Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	: RE Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	BSA Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	Enrichment Control DNA	In a fire or if heated, a pressure increase will occur and the container may burst.
	Hybridization Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	HS Hybridization Stop Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	10 mM rATP	In a fire or if heated, a pressure increase will occur and the container may burst.
	HS Ligation Solution	In a fire or if heated, a pressure increase will occur



## Section 5. Fire-fighting measures

HS DNA Ligase	and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
HS Capture Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
HS Wash 1 Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
HS Wash 2 Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
Primer 1 ION	In a fire or if heated, a pressure increase will occur and the container may burst.
Primer 2 ION	In a fire or if heated, a pressure increase will occur and the container may burst.
HS Elution Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Herculase II Fusion DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
Herculase II Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
100 mM dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
HaloPlex HS ION Indexing Plate	In a fire or if heated, a pressure increase will occur and the container may burst.
Enzyme Strip 1	In a fire or if heated, a pressure increase will occur and the container may burst.
Enzyme Strip 2	In a fire or if heated, a pressure increase will occur and the container may burst.
ClearSeq Probe HS ION	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b> : RE Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
BSA Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Enrichment Control DNA Hybridization Solution	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
HS Hybridization Stop Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
10 mM rATP HS Ligation Solution	No specific data. Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
HS DNA Ligase	Decomposition products may include the following materials: carbon dioxide carbon monoxide

## Section 5. Fire-fighting measures

HS Capture Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
HS Wash 1 Solution	No specific data.
HS Wash 2 Solution	No specific data.
Primer 1 ION	No specific data.
Primer 2 ION	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Herculase II Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
100 mM dNTP Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
HaloPlex HS ION Indexing Plate	No specific data.
Enzyme Strip 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Enzyme Strip 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide
ClearSeq Probe HS ION	No specific data.

### 5.3 Advice for firefighters

#### Special protective actions for fire-fighters

: RE 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.
BSA Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Enrichment Control DNA	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.
Hybridization Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Hybridization Stop Solution	Promptly isolate the scene by removing all persons

## Section 5. Fire-fighting measures

	from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
10 mM rATP	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.
HS Ligation Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS DNA Ligase	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.
HS Capture Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Wash 1 Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Wash 2 Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Primer 1 ION	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.
Primer 2 ION	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.
HS Elution Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction 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.
100 mM dNTP 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.
HaloPlex HS ION Indexing Plate	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.
Enzyme Strip 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.

## Section 5. Fire-fighting measures

	Enzyme Strip 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.
	ClearSeq Probe HS ION	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.
<b>Special protective equipment for fire-fighters</b>	: RE Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	BSA Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Enrichment Control DNA	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Hybridization Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Hybridization Stop Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10 mM rATP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Ligation Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS DNA Ligase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Capture Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Wash 1 Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Wash 2 Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Primer 1 ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Primer 2 ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive

## Section 5. Fire-fighting measures

HS Elution Buffer	pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Herculase II Fusion DNA Polymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Herculase II Reaction Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
100 mM dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HaloPlex HS ION Indexing Plate	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Enzyme Strip 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Enzyme Strip 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
ClearSeq Probe HS ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: RE 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.
	BSA Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	Enrichment Control DNA	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.
	Hybridization Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not

## Section 6. Accidental release measures

	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.
HS Hybridization Stop Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
10 mM rATP	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.
HS Ligation Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
HS DNA Ligase	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.
HS Capture Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
HS Wash 1 Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
HS Wash 2 Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Primer 1 ION	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and



## Section 6. Accidental release measures

Primer 2 ION	unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. 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.
HS Elution Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction 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.
100 mM dNTP 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. Put on appropriate personal protective equipment.
HaloPlex HS ION Indexing Plate	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.
Enzyme Strip 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate

## Section 6. Accidental release measures

ClearSeq Probe HS ION	personal protective equipment. 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.
<b>For emergency responders</b> : RE 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".
BSA Solution	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".
Enrichment Control DNA	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".
Hybridization Solution	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".
HS Hybridization Stop Solution	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".
10 mM rATP	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".
HS Ligation Solution	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".
HS DNA Ligase	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".
HS Capture Solution	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".
HS Wash 1 Solution	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".
HS Wash 2 Solution	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".
Primer 1 ION	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".
Primer 2 ION	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".

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HS Elution 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".
Herculase II Fusion DNA Polymerase	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".
Herculase II Reaction 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".
100 mM dNTP 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".
HaloPlex HS ION Indexing Plate	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".
Enzyme Strip 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".
Enzyme Strip 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".
ClearSeq Probe HS ION	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".

### 6.2 Environmental precautions

: RE 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).
BSA Solution	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).
Enrichment Control DNA	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).
Hybridization Solution	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).
HS Hybridization Stop Solution	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).
10 mM rATP	Avoid dispersal of spilled material and runoff and

## Section 6. Accidental release measures

	contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HS Ligation Solution	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).
HS DNA Ligase	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).
HS Capture Solution	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).
HS Wash 1 Solution	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).
HS Wash 2 Solution	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).
Primer 1 ION	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).
Primer 2 ION	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).
HS Elution Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Herculase II Fusion DNA Polymerase	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).
Herculase II Reaction 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).
100 mM dNTP 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).

## Section 6. Accidental release measures

HaloPlex HS ION Indexing Plate	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).
Enzyme Strip 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).
Enzyme Strip 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).
ClearSeq Probe HS ION	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

**Methods for cleaning up** : RE Buffer

RE 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.
BSA Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Enrichment Control DNA	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.
Hybridization Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HS Hybridization Stop Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
10 mM rATP	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 6. Accidental release measures

HS Ligation Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HS DNA Ligase	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.
HS Capture Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HS Wash 1 Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HS Wash 2 Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Primer 1 ION	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.
Primer 2 ION	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.
HS Elution Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction 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.



## Section 6. Accidental release measures

100 mM dNTP Mix	disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HaloPlex HS ION Indexing Plate	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.
Enzyme Strip 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.
Enzyme Strip 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.
ClearSeq Probe HS ION	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>		
	: RE Buffer	Put on appropriate personal protective equipment (see Section 8).
	BSA Solution	Put on appropriate personal protective equipment (see Section 8).
	Enrichment Control DNA	Put on appropriate personal protective equipment (see Section 8).
	Hybridization Solution	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	HS Hybridization Stop Solution	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



## Section 7. Handling and storage

10 mM rATP	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. Put on appropriate personal protective equipment (see Section 8).
HS Ligation Solution	Put on appropriate personal protective equipment (see Section 8).
HS DNA Ligase	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.
HS Capture Solution	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.
HS Wash 1 Solution	Put on appropriate personal protective equipment (see Section 8).
HS Wash 2 Solution	Put on appropriate personal protective equipment (see Section 8).
Primer 1 ION	Put on appropriate personal protective equipment (see Section 8).
Primer 2 ION	Put on appropriate personal protective equipment (see Section 8).
HS Elution Buffer	Put on appropriate personal protective equipment (see Section 8).
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
100 mM dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
HaloPlex HS ION Indexing Plate	Put on appropriate personal protective equipment (see Section 8).
Enzyme Strip 1	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.
Enzyme Strip 2	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or

## Section 7. Handling and storage

### Advice on general occupational hygiene

ClearSeq Probe HS ION	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. Put on appropriate personal protective equipment (see Section 8).
: RE 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.
BSA Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Enrichment Control DNA	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.
Hybridization Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Hybridization Stop Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
10 mM rATP	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.
HS Ligation Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS DNA Ligase	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

## Section 7. Handling and storage

HS Capture Solution	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. 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.
HS Wash 1 Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Wash 2 Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Primer 1 ION	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.
Primer 2 ION	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.
HS Elution 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.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction 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

## Section 7. Handling and storage

100 mM dNTP Mix

for additional information on hygiene measures. 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.

HaloPlex HS ION Indexing Plate

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.

Enzyme Strip 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.

Enzyme Strip 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.

ClearSeq Probe HS ION

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

### 7.2 Conditions for safe storage, including any incompatibilities

: RE 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.

BSA Solution

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

## Section 7. Handling and storage

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

## Section 7. Handling and storage

HS Capture Solution	<p>incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
HS Wash 1 Solution	<p>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.</p>
HS Wash 2 Solution	<p>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.</p>
Primer 1 ION	<p>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.</p>
Primer 2 ION	<p>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</p>



## Section 7. Handling and storage

HS Elution Buffer

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

Herculase II Fusion DNA Polymerase

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.

Herculase II Reaction 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.

100 mM dNTP 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.

HaloPlex HS ION Indexing Plate

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 7. Handling and storage

Enzyme Strip 1

Store between the following temperatures: -20°C (-4°F). 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.

Enzyme Strip 2

Storage temperature: -20°C (-4°F). 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.

ClearSeq Probe HS ION

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

### 7.3 Specific end use(s)

#### Recommendations

: RE Buffer	Industrial applications, Professional applications.
BSA Solution	Industrial applications, Professional applications.
Enrichment Control DNA	Industrial applications, Professional applications.
Hybridization Solution	Industrial applications, Professional applications.
HS Hybridization Stop Solution	Industrial applications, Professional applications.
10 mM rATP	Industrial applications, Professional applications.
HS Ligation Solution	Industrial applications, Professional applications.
HS DNA Ligase	Industrial applications, Professional applications.
HS Capture Solution	Industrial applications, Professional applications.
HS Wash 1 Solution	Industrial applications, Professional applications.
HS Wash 2 Solution	Industrial applications, Professional applications.
Primer 1 ION	Industrial applications, Professional applications.
Primer 2 ION	Industrial applications, Professional applications.
HS Elution Buffer	Industrial applications, Professional applications.
Herculase II Fusion DNA Polymerase	Industrial applications, Professional applications.
Herculase II Reaction Buffer	Industrial applications, Professional applications.
100 mM dNTP Mix	Industrial applications, Professional applications.
HaloPlex HS ION Indexing Plate	Industrial applications, Professional applications.
Enzyme Strip 1	Industrial applications, Professional applications.

## Section 7. Handling and storage

<b>Industrial sector specific solutions</b>	Enzyme Strip 2	Industrial applications, Professional applications.
	ClearSeq Probe HS ION	Industrial applications, Professional applications.
	RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	Not applicable.
	HS Hybridization Stop Solution	Not applicable.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.
	HS Capture Solution	Not applicable.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
Enzyme Strip 1	Not applicable.	
Enzyme Strip 2	Not applicable.	
ClearSeq Probe HS ION	Not applicable.	

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>RE Buffer</b> potassium acetate	None.
<b>BSA Solution</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>Hybridization Solution</b> Formamide	<b>ACGIH TLV (United States, 3/2016).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 18 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 20 ppm 8 hours. TWA: 30 mg/m <sup>3</sup> 8 hours. STEL: 30 ppm 15 minutes. STEL: 45 mg/m <sup>3</sup> 15 minutes. <b>NIOSH REL (United States, 10/2013).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 10 hours. TWA: 15 mg/m <sup>3</sup> 10 hours.

## Section 8. Exposure controls/personal protection

Sodium chloride	None.
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	<b>AIHA WEEL (United States, 10/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Aerosol
<b>HS Ligation Solution</b> Sodium chloride	None.
<b>HS DNA Ligase</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>HS Capture Solution</b> Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate Sodium chloride	None. None.
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>Herculase II Reaction Buffer</b> Ammonium sulphate Trometamol	None. None.
<b>100 mM dNTP Mix</b> 2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate) 2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	None. None.
<b>Enzyme Strip 1</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
<b>Enzyme Strip 2</b> Glycerol	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2016).</b>

## Section 8. Exposure controls/personal protection

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction  
TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust

### 8.2 Exposure controls

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

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

### Individual protection measures

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

**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

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: RE Buffer	Liquid.
	BSA Solution	Liquid.
	Enrichment Control DNA	Liquid.
	Hybridization Solution	Liquid.
	HS Hybridization Stop Solution	Liquid.
	10 mM rATP	Liquid.
	HS Ligation Solution	Liquid.
	HS DNA Ligase	Liquid.
	HS Capture Solution	Liquid.

## Section 9. Physical and chemical properties

	HS Wash 1 Solution	Liquid.
	HS Wash 2 Solution	Liquid.
	Primer 1 ION	Liquid.
	Primer 2 ION	Liquid.
	HS Elution Buffer	Liquid.
	Herculase II Fusion DNA Polymerase	Liquid.
	Herculase II Reaction Buffer	Liquid.
	100 mM dNTP Mix	Liquid.
	HaloPlex HS ION Indexing Plate	Liquid.
	Enzyme Strip 1	Liquid.
	Enzyme Strip 2	Liquid.
	ClearSeq Probe HS ION	Liquid.
<b>Color</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.
<b>Odor</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.

## Section 9. Physical and chemical properties

<b>Odor threshold</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
ClearSeq Probe HS ION	Not available.	
<b>pH</b>	: RE Buffer	7.9
	BSA Solution	7
	Enrichment Control DNA	Not available.
	Hybridization Solution	7.5
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	7
	HS Ligation Solution	8
	HS DNA Ligase	7.5
	HS Capture Solution	7.5
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	8.5
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	8.5
	Herculase II Fusion DNA Polymerase	8.2
	Herculase II Reaction Buffer	10
	100 mM dNTP Mix	7.5
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
ClearSeq Probe HS ION	Not available.	
<b>Melting point</b>	: RE Buffer	0°C (32°F)
	BSA Solution	Not available.
	Enrichment Control DNA	0°C (32°F)
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	0°C (32°F)
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	0°C (32°F)
	HS Wash 2 Solution	0°C (32°F)
	Primer 1 ION	0°C (32°F)
	Primer 2 ION	0°C (32°F)
	HS Elution Buffer	0°C (32°F)



## Section 9. Physical and chemical properties

	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	0°C (32°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	0°C (32°F)
<b>Boiling point</b>	: RE Buffer	100°C (212°F)
	BSA Solution	Not available.
	Enrichment Control DNA	100°C (212°F)
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	100°C (212°F)
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	100°C (212°F)
	HS Wash 2 Solution	100°C (212°F)
	Primer 1 ION	100°C (212°F)
	Primer 2 ION	100°C (212°F)
	HS Elution Buffer	100°C (212°F)
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	100°C (212°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	100°C (212°F)
<b>Flash point</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.

## Section 9. Physical and chemical properties

<b>Evaporation rate</b>	:	RE Buffer	Not available.
		BSA Solution	Not available.
		Enrichment Control DNA	Not available.
		Hybridization Solution	Not available.
		HS Hybridization Stop Solution	Not available.
		10 mM rATP	Not available.
		HS Ligation Solution	Not available.
		HS DNA Ligase	Not available.
		HS Capture Solution	Not available.
		HS Wash 1 Solution	Not available.
		HS Wash 2 Solution	Not available.
		Primer 1 ION	Not available.
		Primer 2 ION	Not available.
		HS Elution Buffer	Not available.
		Herculase II Fusion DNA Polymerase	Not available.
		Herculase II Reaction Buffer	Not available.
		100 mM dNTP Mix	Not available.
		HaloPlex HS ION Indexing Plate	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.	
<b>Flammability (solid, gas)</b>	:	RE Buffer	Not applicable.
		BSA Solution	Not applicable.
		Enrichment Control DNA	Not applicable.
		Hybridization Solution	Not applicable.
		HS Hybridization Stop Solution	Not applicable.
		10 mM rATP	Not applicable.
		HS Ligation Solution	Not applicable.
		HS DNA Ligase	Not applicable.
		HS Capture Solution	Not applicable.
		HS Wash 1 Solution	Not applicable.
		HS Wash 2 Solution	Not applicable.
		Primer 1 ION	Not applicable.
		Primer 2 ION	Not applicable.
		HS Elution Buffer	Not applicable.
		Herculase II Fusion DNA Polymerase	Not applicable.
		Herculase II Reaction Buffer	Not applicable.
		100 mM dNTP Mix	Not applicable.
		HaloPlex HS ION Indexing Plate	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
	ClearSeq Probe HS ION	Not applicable.	
<b>Lower and upper explosive (flammable) limits</b>	:	RE Buffer	Not available.
		BSA Solution	Not available.
		Enrichment Control DNA	Not available.
		Hybridization Solution	Not available.
		HS Hybridization Stop Solution	Not available.
		10 mM rATP	Not available.
		HS Ligation Solution	Not available.
		HS DNA Ligase	Not available.
		HS Capture Solution	Not available.
		HS Wash 1 Solution	Not available.
		HS Wash 2 Solution	Not available.
		Primer 1 ION	Not available.
		Primer 2 ION	Not available.
		HS Elution Buffer	Not available.

## Section 9. Physical and chemical properties

	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Lower: 0.9%
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.
<b>Vapor pressure</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.
<b>Vapor density</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.

## Section 9. Physical and chemical properties

<b>Relative density</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
ClearSeq Probe HS ION	Not available.	
<b>Solubility</b>	: RE Buffer	Easily soluble in the following materials: cold water and hot water.
	BSA Solution	Soluble in the following materials: cold water and hot water.
	Enrichment Control DNA	Easily soluble in the following materials: cold water and hot water.
	Hybridization Solution	Soluble in the following materials: cold water and hot water.
	HS Hybridization Stop Solution	Soluble in the following materials: cold water and hot water.
	10 mM rATP	Easily soluble in the following materials: cold water and hot water.
	HS Ligation Solution	Easily soluble in the following materials: cold water and hot water.
	HS DNA Ligase	Soluble in the following materials: cold water and hot water.
	HS Capture Solution	Easily soluble in the following materials: cold water and hot water.
	HS Wash 1 Solution	Easily soluble in the following materials: cold water and hot water.
	HS Wash 2 Solution	Easily soluble in the following materials: cold water and hot water.
	Primer 1 ION	Easily soluble in the following materials: cold water and hot water.
	Primer 2 ION	Easily soluble in the following materials: cold water and hot water.
	HS Elution Buffer	Easily soluble in the following materials: cold water and hot water.
	Herculase II Fusion DNA Polymerase	Soluble in the following materials: cold water and hot water.
	Herculase II Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
	100 mM dNTP Mix	Easily soluble in the following materials: cold water and hot water.
	HaloPlex HS ION Indexing Plate	Easily soluble in the following materials: cold water and hot water.

## Section 9. Physical and chemical properties

	Enzyme Strip 1	Soluble in the following materials: cold water and hot water.
	Enzyme Strip 2	Soluble in the following materials: cold water and hot water.
	ClearSeq Probe HS ION	Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.
<b>Auto-ignition temperature</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	ClearSeq Probe HS ION	Not available.
<b>Decomposition temperature</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.

## Section 9. Physical and chemical properties

HS Capture Solution	Not available.
HS Wash 1 Solution	Not available.
HS Wash 2 Solution	Not available.
Primer 1 ION	Not available.
Primer 2 ION	Not available.
HS Elution Buffer	Not available.
Herculase II Fusion DNA Polymerase	Not available.
Herculase II Reaction Buffer	Not available.
100 mM dNTP Mix	Not available.
HaloPlex HS ION Indexing Plate	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
ClearSeq Probe HS ION	Not available.
<b>Viscosity</b> : RE Buffer	Not available.
BSA Solution	Not available.
Enrichment Control DNA	Not available.
Hybridization Solution	Not available.
HS Hybridization Stop Solution	Not available.
10 mM rATP	Not available.
HS Ligation Solution	Not available.
HS DNA Ligase	Not available.
HS Capture Solution	Not available.
HS Wash 1 Solution	Not available.
HS Wash 2 Solution	Not available.
Primer 1 ION	Not available.
Primer 2 ION	Not available.
HS Elution Buffer	Not available.
Herculase II Fusion DNA Polymerase	Not available.
Herculase II Reaction Buffer	Not available.
100 mM dNTP Mix	Not available.
HaloPlex HS ION Indexing Plate	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
ClearSeq Probe HS ION	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b> : RE Buffer	No specific test data related to reactivity available for this product or its ingredients.
BSA Solution	No specific test data related to reactivity available for this product or its ingredients.
Enrichment Control DNA	No specific test data related to reactivity available for this product or its ingredients.
Hybridization Solution	No specific test data related to reactivity available for this product or its ingredients.
HS Hybridization Stop Solution	No specific test data related to reactivity available for this product or its ingredients.
10 mM rATP	No specific test data related to reactivity available for this product or its ingredients.
HS Ligation Solution	No specific test data related to reactivity available for this product or its ingredients.
HS DNA Ligase	No specific test data related to reactivity available for this product or its ingredients.
HS Capture Solution	No specific test data related to reactivity available for this product or its ingredients.
HS Wash 1 Solution	No specific test data related to reactivity available for this product or its ingredients.



## Section 10. Stability and reactivity

HS Wash 2 Solution	No specific test data related to reactivity available for this product or its ingredients.
Primer 1 ION	No specific test data related to reactivity available for this product or its ingredients.
Primer 2 ION	No specific test data related to reactivity available for this product or its ingredients.
HS Elution Buffer	No specific test data related to reactivity available for this product or its ingredients.
Herculase II Fusion DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
Herculase II Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
100 mM dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
HaloPlex HS ION Indexing Plate	No specific test data related to reactivity available for this product or its ingredients.
Enzyme Strip 1	No specific test data related to reactivity available for this product or its ingredients.
Enzyme Strip 2	No specific test data related to reactivity available for this product or its ingredients.
ClearSeq Probe HS ION	No specific test data related to reactivity available for this product or its ingredients.

### 10.2 Chemical stability

: RE Buffer	The product is stable.
BSA Solution	The product is stable.
Enrichment Control DNA	The product is stable.
Hybridization Solution	The product is stable.
HS Hybridization Stop Solution	The product is stable.
10 mM rATP	The product is stable.
HS Ligation Solution	The product is stable.
HS DNA Ligase	The product is stable.
HS Capture Solution	The product is stable.
HS Wash 1 Solution	The product is stable.
HS Wash 2 Solution	The product is stable.
Primer 1 ION	The product is stable.
Primer 2 ION	The product is stable.
HS Elution Buffer	The product is stable.
Herculase II Fusion DNA Polymerase	The product is stable.
Herculase II Reaction Buffer	The product is stable.
100 mM dNTP Mix	The product is stable.
HaloPlex HS ION Indexing Plate	The product is stable.
Enzyme Strip 1	The product is stable.
Enzyme Strip 2	The product is stable.
ClearSeq Probe HS ION	The product is stable.

### 10.3 Possibility of hazardous reactions

: RE Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
BSA Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
Enrichment Control DNA	Under normal conditions of storage and use, hazardous reactions will not occur.
Hybridization Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
HS Hybridization Stop Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
10 mM rATP	Under normal conditions of storage and use, hazardous reactions will not occur.

## Section 10. Stability and reactivity

HS Ligation Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
HS DNA Ligase	Under normal conditions of storage and use, hazardous reactions will not occur.
HS Capture Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
HS Wash 1 Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
HS Wash 2 Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
Primer 1 ION	Under normal conditions of storage and use, hazardous reactions will not occur.
Primer 2 ION	Under normal conditions of storage and use, hazardous reactions will not occur.
HS Elution Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Herculase II Fusion DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
Herculase II Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
100 mM dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
HaloPlex HS ION Indexing Plate	Under normal conditions of storage and use, hazardous reactions will not occur.
Enzyme Strip 1	Under normal conditions of storage and use, hazardous reactions will not occur.
Enzyme Strip 2	Under normal conditions of storage and use, hazardous reactions will not occur.
ClearSeq Probe HS ION	Under normal conditions of storage and use, hazardous reactions will not occur.

### 10.4 Conditions to avoid

: RE Buffer	No specific data.
BSA Solution	No specific data.
Enrichment Control DNA	No specific data.
Hybridization Solution	No specific data.
HS Hybridization Stop Solution	No specific data.
10 mM rATP	No specific data.
HS Ligation Solution	No specific data.
HS DNA Ligase	No specific data.
HS Capture Solution	No specific data.
HS Wash 1 Solution	No specific data.
HS Wash 2 Solution	No specific data.
Primer 1 ION	No specific data.
Primer 2 ION	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA Polymerase	No specific data.
Herculase II Reaction Buffer	No specific data.
100 mM dNTP Mix	No specific data.
HaloPlex HS ION Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
ClearSeq Probe HS ION	No specific data.

## Section 10. Stability and reactivity

<b>10.5 Incompatible materials</b>	: RE Buffer	May react or be incompatible with oxidizing materials.
	BSA Solution	May react or be incompatible with oxidizing materials.
	Enrichment Control DNA	May react or be incompatible with oxidizing materials.
	Hybridization Solution	May react or be incompatible with oxidizing materials.
	HS Hybridization Stop Solution	May react or be incompatible with oxidizing materials.
	10 mM rATP	May react or be incompatible with oxidizing materials.
	HS Ligation Solution	May react or be incompatible with oxidizing materials.
	HS DNA Ligase	May react or be incompatible with oxidizing materials.
	HS Capture Solution	May react or be incompatible with oxidizing materials.
	HS Wash 1 Solution	May react or be incompatible with oxidizing materials.
	HS Wash 2 Solution	May react or be incompatible with oxidizing materials.
	Primer 1 ION	May react or be incompatible with oxidizing materials.
	Primer 2 ION	May react or be incompatible with oxidizing materials.
	HS Elution Buffer	May react or be incompatible with oxidizing materials.
	Herculase II Fusion DNA Polymerase	May react or be incompatible with oxidizing materials.
	Herculase II Reaction Buffer	May react or be incompatible with oxidizing materials.
	100 mM dNTP Mix	May react or be incompatible with oxidizing materials.
	HaloPlex HS ION Indexing Plate	May react or be incompatible with oxidizing materials.
	Enzyme Strip 1	May react or be incompatible with oxidizing materials.
	Enzyme Strip 2	May react or be incompatible with oxidizing materials.
	ClearSeq Probe HS ION	May react or be incompatible with oxidizing materials.
<b>10.6 Hazardous decomposition products</b>	: RE Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	BSA Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Enrichment Control DNA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Hybridization Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	HS Hybridization Stop Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10 mM rATP	Under normal conditions of storage and use,

## Section 10. Stability and reactivity

HS Ligation Solution	hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HS DNA Ligase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HS Capture Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HS Wash 1 Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HS Wash 2 Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Primer 1 ION	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Primer 2 ION	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HS Elution Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Herculase II Fusion DNA Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Herculase II Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
100 mM dNTP Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HaloPlex HS ION Indexing Plate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enzyme Strip 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enzyme Strip 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
ClearSeq Probe HS ION	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### [11.1 Information on toxicological effects](#)

#### [Acute toxicity](#)

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>RE Buffer</b> potassium acetate	LD50 Oral	Rat	3250 mg/kg	-
<b>BSA Solution</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Hybridization Solution</b> Formamide	LC50 Inhalation Dusts and mists LD50 Dermal	Rat Rabbit	>21 mg/l 17 g/kg	4 hours -
Sodium chloride	LD50 Oral LD50 Oral	Rat Rat	4000 mg/kg 3000 mg/kg	- -
<b>HS Ligation Solution</b> Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
<b>HS DNA Ligase</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>HS Capture Solution</b> Acetic acid, (ethylenedinitrilo) tetra-, disodium salt, dihydrate	LD50 Oral	Rat	2214.37 mg/kg	-
Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Herculase II Reaction Buffer</b> Ammonium sulphate	LD50 Oral	Rat	2840 mg/kg	-
Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -
<b>Enzyme Strip 1</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Enzyme Strip 2</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>BSA Solution</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Hybridization Solution</b> Formamide	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

## Section 11. Toxicological information

<b>HS Hybridization Stop Solution</b> Polyethylene glycol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
<b>HS Ligation Solution</b> Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>HS DNA Ligase</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>HS Capture Solution</b> Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Herculase II Reaction Buffer</b> Trometamol	Skin - Moderate irritant	Rabbit	-	25 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
<b>Enzyme Strip 1</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Enzyme Strip 2</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

### Sensitization

Not available.

### Mutagenicity



## Section 11. Toxicological information

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<b>HS Capture Solution</b> Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	Category 3	Not applicable.	Respiratory tract irritation
<b>Herculase II Reaction Buffer</b> Trometamol	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

: RE Buffer	Not available.
BSA Solution	Not available.
Enrichment Control DNA Hybridization Solution	Not available.
HS Hybridization Stop Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.
10 mM rATP	Routes of entry anticipated: Oral, Dermal, Inhalation.
HS Ligation Solution	Not available.
HS DNA Ligase	Not available.
HS Capture Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.
HS Wash 1 Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.
HS Wash 2 Solution	Not available.
Primer 1 ION	Not available.
Primer 2 ION	Not available.
HS Elution Buffer	Not available.
Herculase II Fusion DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
Herculase II Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
100 mM dNTP Mix	Not available.
HaloPlex HS ION Indexing Plate	Not available.
Enzyme Strip 1	Routes of entry anticipated: Oral, Dermal, Inhalation.
Enzyme Strip 2	Routes of entry anticipated: Oral, Dermal, Inhalation.
ClearSeq Probe HS ION	Not available.

## Section 11. Toxicological information

### Potential acute health effects

#### Eye contact

: RE Buffer	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Hybridization Solution	Causes serious eye irritation.
HS Hybridization Stop Solution	Causes eye irritation.
10 mM rATP	No known significant effects or critical hazards.
HS Ligation Solution	No known significant effects or critical hazards.
HS DNA Ligase	Causes eye irritation.
HS Capture Solution	Causes serious eye irritation.
HS Wash 1 Solution	No known significant effects or critical hazards.
HS Wash 2 Solution	No known significant effects or critical hazards.
Primer 1 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	Causes eye irritation.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	Causes eye irritation.
Enzyme Strip 2	Causes eye irritation.
ClearSeq Probe HS ION	No known significant effects or critical hazards.

#### Inhalation

: RE Buffer	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Hybridization Solution	No known significant effects or critical hazards.
HS Hybridization Stop Solution	No known significant effects or critical hazards.
10 mM rATP	No known significant effects or critical hazards.
HS Ligation Solution	No known significant effects or critical hazards.
HS DNA Ligase	No known significant effects or critical hazards.
HS Capture Solution	No known significant effects or critical hazards.
HS Wash 1 Solution	No known significant effects or critical hazards.
HS Wash 2 Solution	No known significant effects or critical hazards.
Primer 1 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
ClearSeq Probe HS ION	No known significant effects or critical hazards.

#### Skin contact

: RE Buffer	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Hybridization Solution	No known significant effects or critical hazards.
HS Hybridization Stop Solution	No known significant effects or critical hazards.
10 mM rATP	No known significant effects or critical hazards.
HS Ligation Solution	No known significant effects or critical hazards.
HS DNA Ligase	No known significant effects or critical hazards.
HS Capture Solution	No known significant effects or critical hazards.
HS Wash 1 Solution	No known significant effects or critical hazards.
HS Wash 2 Solution	No known significant effects or critical hazards.
Primer 1 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.

## Section 11. Toxicological information

	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.
<b>Ingestion</b>	: RE Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	HS Hybridization Stop Solution	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	HS Ligation Solution	No known significant effects or critical hazards.
	HS DNA Ligase	No known significant effects or critical hazards.
	HS Capture Solution	No known significant effects or critical hazards.
	HS Wash 1 Solution	No known significant effects or critical hazards.
	HS Wash 2 Solution	No known significant effects or critical hazards.
	Primer 1 ION	No known significant effects or critical hazards.
	Primer 2 ION	No known significant effects or critical hazards.
	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.

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

<b>Eye contact</b>	: RE Buffer	No specific data.
	BSA Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: pain or irritation watering redness
	HS Hybridization Stop Solution	Adverse symptoms may include the following: irritation watering redness
	10 mM rATP	No specific data.
	HS Ligation Solution	No specific data.
	HS DNA Ligase	Adverse symptoms may include the following: irritation watering redness
	HS Capture Solution	Adverse symptoms may include the following: pain or irritation watering redness
	HS Wash 1 Solution	No specific data.
	HS Wash 2 Solution	No specific data.
	Primer 1 ION	No specific data.

## Section 11. Toxicological information

	Primer 2 ION	No specific data.
	HS Elution Buffer	No specific data.
	Herculase II Fusion DNA	Adverse symptoms may include the following:
	Polymerase	irritation
		watering
		redness
	Herculase II Reaction Buffer	No specific data.
	100 mM dNTP Mix	No specific data.
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	Adverse symptoms may include the following:
		irritation
		watering
		redness
	Enzyme Strip 2	Adverse symptoms may include the following:
		irritation
		watering
		redness
	ClearSeq Probe HS ION	No specific data.
<b>Inhalation</b>	: RE Buffer	No specific data.
	BSA Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Hybridization Solution	Adverse symptoms may include the following:
		reduced fetal weight
		increase in fetal deaths
		skeletal malformations
	HS Hybridization Stop Solution	No specific data.
	10 mM rATP	No specific data.
	HS Ligation Solution	No specific data.
	HS DNA Ligase	No specific data.
	HS Capture Solution	No specific data.
	HS Wash 1 Solution	No specific data.
	HS Wash 2 Solution	No specific data.
	Primer 1 ION	No specific data.
	Primer 2 ION	No specific data.
	HS Elution Buffer	No specific data.
	Herculase II Fusion DNA	No specific data.
	Polymerase	No specific data.
	Herculase II Reaction Buffer	No specific data.
	100 mM dNTP Mix	No specific data.
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	ClearSeq Probe HS ION	No specific data.
<b>Skin contact</b>	: RE Buffer	No specific data.
	BSA Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Hybridization Solution	Adverse symptoms may include the following:
		reduced fetal weight
		increase in fetal deaths
		skeletal malformations
	HS Hybridization Stop Solution	No specific data.
	10 mM rATP	No specific data.
	HS Ligation Solution	No specific data.
	HS DNA Ligase	No specific data.
	HS Capture Solution	No specific data.
	HS Wash 1 Solution	No specific data.
	HS Wash 2 Solution	No specific data.

## Section 11. Toxicological information

	Primer 1 ION	No specific data.
	Primer 2 ION	No specific data.
	HS Elution Buffer	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	Herculase II Reaction Buffer	No specific data.
	100 mM dNTP Mix	No specific data.
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	ClearSeq Probe HS ION	No specific data.
<b>Ingestion</b>	: RE Buffer	No specific data.
	BSA Solution	No specific data.
	Enrichment Control DNA	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	HS Hybridization Stop Solution	No specific data.
	10 mM rATP	No specific data.
	HS Ligation Solution	No specific data.
	HS DNA Ligase	No specific data.
	HS Capture Solution	No specific data.
	HS Wash 1 Solution	No specific data.
	HS Wash 2 Solution	No specific data.
	Primer 1 ION	No specific data.
	Primer 2 ION	No specific data.
	HS Elution Buffer	No specific data.
	Herculase II Fusion DNA Polymerase	No specific data.
	Herculase II Reaction Buffer	No specific data.
	100 mM dNTP Mix	No specific data.
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	ClearSeq Probe HS ION	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

<b>General</b>	: RE Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	HS Hybridization Stop Solution	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	HS Ligation Solution	No known significant effects or critical hazards.
	HS DNA Ligase	No known significant effects or critical hazards.

## Section 11. Toxicological information

	HS Capture Solution	No known significant effects or critical hazards.
	HS Wash 1 Solution	No known significant effects or critical hazards.
	HS Wash 2 Solution	No known significant effects or critical hazards.
	Primer 1 ION	No known significant effects or critical hazards.
	Primer 2 ION	No known significant effects or critical hazards.
	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: RE Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	HS Hybridization Stop Solution	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	HS Ligation Solution	No known significant effects or critical hazards.
	HS DNA Ligase	No known significant effects or critical hazards.
	HS Capture Solution	No known significant effects or critical hazards.
	HS Wash 1 Solution	No known significant effects or critical hazards.
	HS Wash 2 Solution	No known significant effects or critical hazards.
	Primer 1 ION	No known significant effects or critical hazards.
	Primer 2 ION	No known significant effects or critical hazards.
	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: RE Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	HS Hybridization Stop Solution	No known significant effects or critical hazards.
	10 mM rATP	No known significant effects or critical hazards.
	HS Ligation Solution	No known significant effects or critical hazards.
	HS DNA Ligase	No known significant effects or critical hazards.
	HS Capture Solution	No known significant effects or critical hazards.
	HS Wash 1 Solution	No known significant effects or critical hazards.
	HS Wash 2 Solution	No known significant effects or critical hazards.
	Primer 1 ION	No known significant effects or critical hazards.
	Primer 2 ION	No known significant effects or critical hazards.
	HS Elution Buffer	No known significant effects or critical hazards.
	Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
	Herculase II Reaction Buffer	No known significant effects or critical hazards.
	100 mM dNTP Mix	No known significant effects or critical hazards.
	HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.



## Section 11. Toxicological information

<b>Teratogenicity</b>	:	RE Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Hybridization Solution	May damage the unborn child.
		HS Hybridization Stop Solution	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		HS Ligation Solution	No known significant effects or critical hazards.
		HS DNA Ligase	No known significant effects or critical hazards.
		HS Capture Solution	No known significant effects or critical hazards.
		HS Wash 1 Solution	No known significant effects or critical hazards.
		HS Wash 2 Solution	No known significant effects or critical hazards.
		Primer 1 ION	No known significant effects or critical hazards.
		Primer 2 ION	No known significant effects or critical hazards.
		HS Elution Buffer	No known significant effects or critical hazards.
		Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
		Herculase II Reaction Buffer	No known significant effects or critical hazards.
		100 mM dNTP Mix	No known significant effects or critical hazards.
		HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.	
<b>Developmental effects</b>	:	RE Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		HS Hybridization Stop Solution	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		HS Ligation Solution	No known significant effects or critical hazards.
		HS DNA Ligase	No known significant effects or critical hazards.
		HS Capture Solution	No known significant effects or critical hazards.
		HS Wash 1 Solution	No known significant effects or critical hazards.
		HS Wash 2 Solution	No known significant effects or critical hazards.
		Primer 1 ION	No known significant effects or critical hazards.
		Primer 2 ION	No known significant effects or critical hazards.
		HS Elution Buffer	No known significant effects or critical hazards.
		Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
		Herculase II Reaction Buffer	No known significant effects or critical hazards.
		100 mM dNTP Mix	No known significant effects or critical hazards.
		HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
	ClearSeq Probe HS ION	No known significant effects or critical hazards.	
<b>Fertility effects</b>	:	RE Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		HS Hybridization Stop Solution	No known significant effects or critical hazards.
		10 mM rATP	No known significant effects or critical hazards.
		HS Ligation Solution	No known significant effects or critical hazards.
		HS DNA Ligase	No known significant effects or critical hazards.
		HS Capture Solution	No known significant effects or critical hazards.
		HS Wash 1 Solution	No known significant effects or critical hazards.
		HS Wash 2 Solution	No known significant effects or critical hazards.
		Primer 1 ION	No known significant effects or critical hazards.
		Primer 2 ION	No known significant effects or critical hazards.
		HS Elution Buffer	No known significant effects or critical hazards.

## Section 11. Toxicological information

Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
ClearSeq Probe HS ION	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
<b>RE Buffer</b> Oral	264227.6 mg/kg
<b>Hybridization Solution</b> Oral	8086.3 mg/kg
<b>HS Ligation Solution</b> Oral	187500 mg/kg
<b>HS Capture Solution</b> Oral Dermal Inhalation (vapors)	5057.3 mg/kg 11702.1 mg/kg 117 mg/l
<b>Herculase II Reaction Buffer</b> Oral	78401.1 mg/kg

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>RE Buffer</b> potassium acetate	Acute EC50 1.05 g/L Fresh water	Daphnia - Daphnia similis - Neonate	48 hours
	Acute LC50 313 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia	48 hours
	Acute LC50 298 mg/l Fresh water	Fish - Pimephales promelas	96 hours
<b>BSA Solution</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>Hybridization Solution</b> Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1.56 g/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 3 weeks

## Section 12. Ecological information

<b>HS Hybridization Stop Solution</b> Polyethylene glycol	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
<b>HS Ligation Solution</b> Sodium chloride	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1.56 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours 48 hours 96 hours 3 weeks
<b>HS DNA Ligase</b> Glycerol	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
<b>HS Capture Solution</b> Sodium chloride	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1.56 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours 48 hours 96 hours 3 weeks
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
<b>Herculase II Reaction Buffer</b> Ammonium sulphate	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 2.6 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Young	48 hours
	Acute LC50 14000 to 15000 µg/l Fresh water Acute LC50 68 µg/l Fresh water	Daphnia - Daphnia magna - Young Fish - Oncorhynchus gorbuscha - Alevin	48 hours 96 hours
Trometamol	Chronic NOEC 7.5 mg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
	Chronic NOEC 143 µg/l Marine water	Fish - Salmo salar - Post-smolt	5 weeks
	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours
<b>Enzyme Strip 1</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

## Section 12. Ecological information

<b>Enzyme Strip 2</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
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### 12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>Herculase II Reaction Buffer</b> Ammonium sulphate	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>RE Buffer</b> potassium acetate	-3.72	3.162	low
<b>BSA Solution</b> Glycerol	-1.76	-	low
<b>Hybridization Solution</b> Formamide	-0.82	-	low
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	-	3.2	low
<b>HS DNA Ligase</b> Glycerol	-1.76	-	low
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	-1.76	-	low
<b>Herculase II Reaction Buffer</b> Ammonium sulphate	-5.1	-	low
Trometamol	-1.56	-	low
<b>Enzyme Strip 1</b> Glycerol	-1.76	-	low
<b>Enzyme Strip 2</b> Glycerol	-1.76	-	low

### 12.4 Mobility in soil

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

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

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

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

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

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

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

## Section 15. Regulatory information

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

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-; Formamide  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
**Clean Water Act (CWA) 311:** Edetic acid

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

## Section 15. Regulatory information

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

#### **Classification**

<input checked="" type="checkbox"/> RE Buffer	Not applicable.
BSA Solution	Not applicable.
Enrichment Control DNA	Not applicable.
Hybridization Solution	Immediate (acute) health hazard
	Delayed (chronic) health hazard
HS Hybridization Stop Solution	Immediate (acute) health hazard
10 mM rATP	Not applicable.
HS Ligation Solution	Not applicable.
HS DNA Ligase	Immediate (acute) health hazard
HS Capture Solution	Immediate (acute) health hazard
HS Wash 1 Solution	Not applicable.
HS Wash 2 Solution	Not applicable.
Primer 1 ION	Not applicable.
Primer 2 ION	Not applicable.
HS Elution Buffer	Not applicable.
Herculase II Fusion DNA Polymerase	Immediate (acute) health hazard
Herculase II Reaction Buffer	Not applicable.
100 mM dNTP Mix	Not applicable.
HaloPlex HS ION Indexing Plate	Not applicable.
Enzyme Strip 1	Immediate (acute) health hazard
Enzyme Strip 2	Immediate (acute) health hazard
ClearSeq Probe HS ION	Not applicable.

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<b>RE Buffer</b> potassium acetate	≤3	Yes.	No.	No.	Yes.	No.
<b>BSA Solution</b> Glycerol	<10	No.	No.	No.	Yes.	No.
<b>Hybridization Solution</b> Formamide	≥25 - ≤50	No.	No.	No.	Yes.	Yes.
Sodium chloride	≥10 - ≤25	No.	No.	No.	Yes.	No.
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	≥25 - ≤50	No.	No.	No.	Yes.	No.
<b>HS Ligation Solution</b> Sodium chloride	≤3	No.	No.	No.	Yes.	No.
<b>HS DNA Ligase</b> Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
<b>HS Capture Solution</b>						



## Section 15. Regulatory information

Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	<10	No.	No.	No.	Yes.	No.
Sodium chloride	≤3	No.	No.	No.	Yes.	No.
<b>Herculase II Fusion DNA Polymerase</b>						
Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
<b>Herculase II Reaction Buffer</b>						
Ammonium sulphate	≤3	No.	No.	No.	Yes.	No.
Trometamol	≤3	Yes.	No.	No.	Yes.	No.
<b>100 mM dNTP Mix</b>						
2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate)	≤3	No.	No.	No.	Yes.	No.
2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	≤3	No.	No.	No.	Yes.	No.
<b>Enzyme Strip 1</b>						
Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
<b>Enzyme Strip 2</b>						
Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	<b>Herculase II Reaction Buffer</b> Ammonium sulphate	7783-20-2	≤3
<b>Supplier notification</b>	<b>Herculase II Reaction Buffer</b> Ammonium sulphate	7783-20-2	≤3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST; FORMAMIDE
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; FORMAMIDE
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL; FORMAMIDE

### International regulations

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

Not listed.

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

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

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

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

## Section 15. Regulatory information

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

## Section 16. Other information

### History

<b>Date of issue</b>	: 08/09/2017
<b>Date of previous issue</b>	: 04/28/2016.
<b>Version</b>	: 3

Indicates information that has changed from previously issued version.

### Notice to reader

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