

# SAFETY DATA SHEET

HaloPlex HS Target Enrichment Kits - ILM - 96 reactions

## Section 1. Identification

### 1.1 Product identifier

<b>Product name</b>	: HaloPlex HS Target Enrichment Kits - ILM - 96 reactions	
<b>Part no. (chemical kit)</b>	: G9931B, G9941B, G9951B	
<b>Part no.</b>	: RE Buffer	5190-7972
	BSA Solution	5190-7973
	Enrichment Control DNA	5190-7976
	Hybridization Solution	5190-7977
	HS Hybridization Stop Solution	5190-7978
	10 mM rATP	5190-7979
	HS Ligation Solution	5190-7980
	HS DNA Ligase	5190-7981
	HS Capture Solution	5190-7982
	HS Wash 1 Solution	5190-7983
	HS Wash 2 Solution	5190-7986
	Primer 1	5190-7987
	Primer 2	5190-7988
	HS Elution Buffer	5190-7989
	Herculase II Fusion DNA Polymerase	5190-7990
	Herculase II Reaction Buffer	5190-7991
	100 mM dNTP Mix	5190-7992
	HaloPlex HS ILM Indexing Plate	5190-9461
	Enzyme Strip 1	5190-7974
	Enzyme Strip 2	5190-7975
	HaloPlex HS Probe ILM	5190-7846 / 5190-7848 / 5190-7850 / 5190-7852 / 5190-7854 / 5190-7856

**Validation date** : 2/14/2018

### 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 3.3 ml (96 reactions)
	BSA Solution 0.07 ml (96 reactions)
	Enrichment Control DNA 0.615 ml (96 reactions)
	Hybridization Solution 4.9 ml (96 reactions)
	HS Hybridization Stop Solution 4 ml (96 reactions)
	10 mM rATP 0.04 ml (96 reactions)
	HS Ligation Solution 1.5 ml (96 reactions)
	HS DNA Ligase 0.36 ml (96 reactions)
	HS Capture Solution 5.4 ml (96 reactions)
	HS Wash 1 Solution 13.4 ml (96 reactions)
	HS Wash 2 Solution 2 x 11 ml (96 reactions)
	Primer 1 0.575 ml (96 reactions)
	Primer 2 1.15 ml (96 reactions)
	HS Elution Buffer 30 ml (96 reactions)
	Herculase II Fusion DNA Polymerase 0.575 ml (96 reactions)
	Herculase II Reaction Buffer 4.3 ml (96 reactions)
	100 mM dNTP Mix 0.115 ml (96 reactions)
	HaloPlex HS ILM Indexing Plate 96 x 0.0075 ml (96 reactions)
	Enzyme Strip 1 0.4 ml (96 reactions)
	Enzyme Strip 2 0.4 ml (96 reactions)
	HaloPlex HS Probe ILM 0.714 ml (96 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	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	10 mM rATP	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 1910.1200), 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.

## 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	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	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 ILM 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).
HaloPlex HS Probe ILM	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  
 H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

### 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

## Section 2. Hazards identification

(s) of unknown inhalation toxicity: 30 - 60%

### 2.2 GHS label elements

#### Hazard pictograms

: Hybridization Solution



HS Hybridization Stop Solution



HS Capture Solution



#### Signal word

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

#### Hazard statements

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	H319 - Causes serious eye irritation.
HS Hybridization Stop Solution	H360 - May damage the unborn child.
	H320 - Causes eye irritation.
	H335 - May cause respiratory irritation.
10 mM rATP	No known significant effects or critical hazards.
HS Ligation Solution	No known significant effects or critical hazards.
HS DNA Ligase	H320 - Causes eye irritation.
HS Capture Solution	H319 - 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	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	H320 - Causes eye irritation.

## Section 2. Hazards identification

Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ILM Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	H320 - Causes eye irritation.
Enzyme Strip 2	H320 - Causes eye irritation.
HaloPlex HS Probe ILM	No known significant effects or critical hazards.

### Precautionary statements

#### 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>P271 - Use only outdoors or in a well-ventilated area.</li> <li>P261 - Avoid breathing vapor.</li> <li>P264 - Wash hands thoroughly after handling.</li> </ul>
HS Hybridization Stop Solution	<ul style="list-style-type: none"> <li>P264 - Wash hands thoroughly after handling.</li> <li>P271 - Use only outdoors or in a well-ventilated area.</li> <li>P261 - Avoid breathing vapor.</li> <li>P264 - Wash hands thoroughly after handling.</li> </ul>
<ul style="list-style-type: none"> <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</li> <li>Primer 2</li> <li>HS Elution Buffer</li> <li>Herculase II Fusion DNA</li> <li>Polymerase</li> <li>Herculase II Reaction Buffer</li> <li>100 mM dNTP Mix</li> <li>HaloPlex HS ILM Indexing Plate</li> <li>Enzyme Strip 1</li> <li>Enzyme Strip 2</li> <li>HaloPlex HS Probe ILM</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>Not applicable.</li> <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>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>
HS Hybridization Stop Solution	<ul style="list-style-type: none"> <li>P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.</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</li> </ul>

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	10 mM rATP	attention.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.
		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.
	HS Capture Solution	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.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1	Not applicable.
	Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	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	P405 - Store locked up.
	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	Not applicable.
	Primer 2	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	Herculase II Reaction Buffer	Not applicable.

## Section 2. Hazards identification

### Disposal

100 mM dNTP Mix	Not applicable.
HaloPlex HS ILM Indexing Plate	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
HaloPlex HS Probe ILM	Not applicable.
<b>RE Buffer</b>	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	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
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	Not applicable.
Primer 2	Not applicable.
HS Elution Buffer	Not applicable.
Herculase II Fusion DNA Polymerase	Not applicable.

### Supplemental label elements

Herculase II Reaction Buffer	Not applicable.
100 mM dNTP Mix	Not applicable.
HaloPlex HS ILM Indexing Plate	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
HaloPlex HS Probe ILM	Not applicable.
<b>RE Buffer</b>	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	None known.
Primer 2	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 ILM Indexing Plate	None known.
Enzyme Strip 1	None known.
Enzyme Strip 2	None known.
HaloPlex HS Probe ILM	None known.

### 2.3 Other hazards



## Section 2. Hazards identification

<b>Hazards not otherwise classified</b>	<b>:</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	None known.
	Primer 2	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 ILM Indexing Plate	None known.
	Enzyme Strip 1	None known.
	Enzyme Strip 2	None known.
HaloPlex HS Probe ILM	None known.	

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	<b>:</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	Mixture
	Primer 2	Mixture
	HS Elution Buffer	Mixture
	Herculase II Fusion DNA Polymerase	Mixture
	Herculase II Reaction Buffer	Mixture
	100 mM dNTP Mix	Mixture
	HaloPlex HS ILM Indexing Plate	Mixture
	Enzyme Strip 1	Mixture
	Enzyme Strip 2	Mixture
HaloPlex HS Probe ILM	Mixture	

Ingredient name	%	CAS number
<b>BSA Solution</b> Glycerol	<10	56-81-5
<b>Hybridization Solution</b> Formamide	≥25 - ≤50	75-12-7
Sodium chloride	≥10 - ≤25	7647-14-5
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	≥25 - ≤50	25322-68-3

## Section 3. Composition/information on ingredients

<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>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.

## Section 4. First aid measures

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.
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	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	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 ILM 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.

## Section 4. First aid measures

### Inhalation

HaloPlex HS Probe ILM	<p>Continue to rinse for at least 10 minutes. If irritation persists, get medical attention. 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.</p>
: RE Buffer	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</p>
BSA Solution	<p>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.</p>
Enrichment Control DNA	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</p>
Hybridization 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 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 it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</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</p>

## Section 4. First aid measures

	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.
HS Capture 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 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.
HS Wash 1 Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HS Wash 2 Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Primer 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Primer 2	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

## Section 4. First aid measures

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 ILM 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 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.

HaloPlex HS Probe ILM

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

### Skin contact

: 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

## Section 4. First aid measures

HS Ligation Solution	medical attention if symptoms occur. 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	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Primer 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
HS Elution Buffer	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 ILM 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.
HaloPlex HS Probe ILM	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

## Section 4. First aid measures

### Ingestion

: 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 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.

HS Hybridization Stop 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 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.

10 mM rATP

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.



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HS Ligation 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.
HS DNA Ligase	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.
HS Capture 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 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.
HS Wash 1 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.
HS Wash 2 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.
Primer 1	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

## Section 4. First aid measures

Primer 2	<p>medical attention if symptoms occur. 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 medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Herculase II Reaction 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>
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 ILM 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</p>

## Section 4. First aid measures

Enzyme Strip 2

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.

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.

HaloPlex HS Probe ILM

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.

### 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	No known significant effects or critical hazards.
Primer 2	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 ILM Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	Causes eye irritation.
Enzyme Strip 2	Causes eye irritation.
HaloPlex HS Probe ILM	No known significant effects or critical hazards.



## Section 4. First aid measures

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 ILM 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.
HaloPlex HS Probe ILM	No known significant effects or critical hazards.

### Over-exposure signs/symptoms

#### Eye 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: 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	No specific data.
Primer 2	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 ILM 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
HaloPlex HS Probe ILM	No specific data.

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### Inhalation

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	Adverse symptoms may include the following: respiratory tract irritation coughing
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	No specific data.
Primer 2	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA	No specific data.
Polymerase	
Herculase II Reaction Buffer	No specific data.
100 mM dNTP Mix	No specific data.
HaloPlex HS ILM Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
HaloPlex HS Probe ILM	No specific data.

### 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	No specific data.
Primer 2	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA	No specific data.
Polymerase	
Herculase II Reaction Buffer	No specific data.
100 mM dNTP Mix	No specific data.
HaloPlex HS ILM Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
HaloPlex HS Probe ILM	No specific data.

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<b>Ingestion</b>	: 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 Primer 2 HS Elution Buffer Herculase II Fusion DNA Polymerase Herculase II Reaction Buffer 100 mM dNTP Mix HaloPlex HS ILM Indexing Plate Enzyme Strip 1 Enzyme Strip 2 HaloPlex HS Probe ILM	No specific data. No specific data. No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations No specific data.
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### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	: 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	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  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.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  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.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  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.  Treat symptomatically. Contact poison treatment
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## Section 4. First aid measures

HS Wash 2 Solution	specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Primer 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Primer 2	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 ILM 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.
Enzyme Strip 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
HaloPlex HS Probe ILM	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	No specific treatment.
Primer 2	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 ILM Indexing Plate	No specific treatment.
Enzyme Strip 1	No specific treatment.
Enzyme Strip 2	No specific treatment.
HaloPlex HS Probe ILM	No specific treatment.



## Section 4. First aid measures

<b>Protection of first-aiders</b>	: 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. 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.
	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 the person providing aid to give mouth-to-mouth resuscitation.
	HS Wash 1 Solution	No action shall be taken involving any personal risk or without suitable training.
	HS Wash 2 Solution	No action shall be taken involving any personal risk or without suitable training.
	Primer 1	No action shall be taken involving any personal risk or without suitable training.
	Primer 2	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 ILM 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

## Section 4. First aid measures

HaloPlex HS Probe ILM	resuscitation. No action shall be taken involving any personal risk or without suitable training.
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See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

: 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 surrounding fire.
Primer 1	Use an extinguishing agent suitable for the surrounding fire.
Primer 2	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 ILM 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.
HaloPlex HS Probe ILM	Use an extinguishing agent suitable for the surrounding fire.

#### Unsuitable extinguishing media

: 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.

## Section 5. Fire-fighting measures

HS DNA Ligase	None known.
HS Capture Solution	None known.
HS Wash 1 Solution	None known.
HS Wash 2 Solution	None known.
Primer 1	None known.
Primer 2	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 ILM Indexing Plate	None known.
Enzyme Strip 1	None known.
Enzyme Strip 2	None known.
HaloPlex HS Probe ILM	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 and the container may burst.
	HS DNA Ligase	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	In a fire or if heated, a pressure increase will occur and the container may burst.
	Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	In a fire or if heated, a pressure increase will occur

## Section 5. Fire-fighting measures

### Hazardous thermal decomposition products

: RE Buffer

and the container may burst.

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
metal oxide/oxides

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

No specific data.

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds  
metal oxide/oxides

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide

No specific data.

Decomposition products may include the following materials:

halogenated compounds  
metal oxide/oxides

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds  
metal oxide/oxides

No specific data.

No specific data.

No specific data.

No specific data.

No specific data.

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
metal oxide/oxides

Decomposition products may include the following materials:

carbon dioxide

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  
Primer 2  
HS Elution Buffer  
Herculase II Fusion DNA Polymerase

Herculase II Reaction Buffer

100 mM dNTP Mix

## Section 5. Fire-fighting measures

	carbon monoxide nitrogen oxides phosphorus oxides No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide
HaloPlex HS ILM Indexing Plate Enzyme Strip 1	No specific data. 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
HaloPlex HS Probe ILM	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 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

## Section 5. Fire-fighting measures

Primer 1	without suitable training. 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	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 ILM 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.
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.
HaloPlex HS Probe ILM	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

## Section 5. Fire-fighting measures

10 mM rATP	(SCBA) with a full face-piece operated in positive 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.
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	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	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Elution Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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 ILM 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

## Section 5. Fire-fighting measures

HaloPlex HS Probe ILM

equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive 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.

## Section 6. Accidental release measures

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

**For non-emergency personnel**

: 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 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.



## Section 6. Accidental release measures

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	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 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
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

## Section 6. Accidental release measures

100 mM dNTP Mix	surrounding areas. Keep unnecessary and 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.
HaloPlex HS ILM 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 personal protective equipment.
HaloPlex HS Probe ILM	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

## Section 6. Accidental release measures

10 mM rATP	the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
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	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	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 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 ILM 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".

## Section 6. Accidental release measures

### 6.2 Environmental precautions

HaloPlex HS Probe ILM	on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
: 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 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

## 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).
Primer 1	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 2	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
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).
HaloPlex HS ILM 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).
HaloPlex HS Probe ILM	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

## Section 6. Accidental release measures

<b>Methods for cleaning up</b>	: 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.
	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.

## Section 6. Accidental release measures

HS Wash 2 Solution	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.
Primer 1	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Primer 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
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.
100 mM dNTP Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HaloPlex HS ILM 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 contractor.

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disposal container. Dispose of via a licensed waste disposal contractor.

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

#### Protective measures

:  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. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

10 mM rATP

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



## Section 7. Handling and storage

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 Put on appropriate personal protective equipment (see Section 8).

Primer 2 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 ILM 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 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.

HaloPlex HS Probe ILM Put on appropriate personal protective equipment (see Section 8).

### Advice on general occupational hygiene

: 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.

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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 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 Capture 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 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

## Section 7. Handling and storage

Primer 1	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.
Primer 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
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 for additional information on hygiene measures.
100 mM dNTP Mix	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HaloPlex HS ILM 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.

## Section 7. Handling and storage

Enzyme Strip 2	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 Probe ILM	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

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.
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

## Section 7. Handling and storage

HS Hybridization Stop Solution	<p>containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <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. 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.</p>
10 mM rATP	<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 Ligation 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 DNA Ligase	<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 Capture 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>

## Section 7. Handling and storage

HS Wash 1 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 Wash 2 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.

Primer 1

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

Primer 2

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until 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 Elution Buffer

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

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

## Section 7. Handling and storage

Herculase II Reaction Buffer	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.
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 ILM 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.
Enzyme Strip 1	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.
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

## Section 7. Handling and storage

### HaloPlex HS Probe ILM

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.

### 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	Industrial applications, Professional applications.
Primer 2	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 ILM Indexing Plate	Industrial applications, Professional applications.
Enzyme Strip 1	Industrial applications, Professional applications.
Enzyme Strip 2	Industrial applications, Professional applications.
HaloPlex HS Probe ILM	Industrial applications, Professional applications.

#### Industrial sector specific solutions

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	Not applicable.
Primer 2	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.



## Section 7. Handling and storage

HaloPlex HS ILM Indexing Plate	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
HaloPlex HS Probe ILM	Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<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, 3/2017).</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, 10/2016).</b> <b>Absorbed through skin.</b> TWA: 10 ppm 10 hours. TWA: 15 mg/m <sup>3</sup> 10 hours.
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.

## Section 8. Exposure controls/personal protection

<p><b>Herculase II Fusion DNA Polymerase</b> Glycerol</p>	<p><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</p>
<p><b>Herculase II Reaction Buffer</b> Ammonium sulphate Trometamol</p>	<p>None. None.</p>
<p><b>Enzyme Strip 1</b> Glycerol</p>	<p><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</p>
<p><b>Enzyme Strip 2</b> Glycerol</p>	<p><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</p>

### 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

## Section 8. Exposure controls/personal 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.	
	HS Wash 1 Solution	Liquid.	
	HS Wash 2 Solution	Liquid.	
	Primer 1	Liquid.	
	Primer 2	Liquid.	
	HS Elution Buffer	Liquid.	
	Herculase II Fusion DNA Polymerase	Liquid.	
	Herculase II Reaction Buffer	Liquid.	
	100 mM dNTP Mix	Liquid.	
	HaloPlex HS ILM Indexing Plate	Liquid.	
	Enzyme Strip 1	Liquid.	
	Enzyme Strip 2	Liquid.	
	HaloPlex HS Probe ILM	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		Not available.	
Primer 2		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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	Not available.
<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	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	Not available.
<b>pH</b>	:	

## Section 9. Physical and chemical properties

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	Not available.
Primer 2	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 ILM Indexing Plate	Not available.
Enzyme Strip 1	7.4
Enzyme Strip 2	Not available.
HaloPlex HS Probe ILM	Not available.

### Melting point

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	0°C (32°F)
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	0°C (32°F)
Primer 2	0°C (32°F)
HS Elution Buffer	0°C (32°F)
Herculase II Fusion DNA Polymerase	Not available.
Herculase II Reaction Buffer	Not available.
100 mM dNTP Mix	Not available.
HaloPlex HS ILM Indexing Plate	0°C (32°F)
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
HaloPlex HS Probe ILM	0°C (32°F)

### Boiling point

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	100°C (212°F)
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	100°C (212°F)
Primer 2	100°C (212°F)
HS Elution Buffer	100°C (212°F)
Herculase II Fusion DNA	Not available.

## Section 9. Physical and chemical properties

	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ILM Indexing Plate	100°C (212°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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	Not available.
	Primer 2	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA	Not available.
	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	Not available.
<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	Not available.
	Primer 2	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA	Not available.
	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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.

## Section 9. Physical and chemical properties

	HS DNA Ligase	Not applicable.
	HS Capture Solution	Not applicable.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1	Not applicable.
	Primer 2	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 ILM Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
	HaloPlex HS Probe ILM	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	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	Not available.

## Section 9. Physical and chemical properties

<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	Not available.
		Primer 2	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 ILM Indexing Plate	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	Not available.	
<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	Not available.
		Primer 2	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 ILM Indexing Plate	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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



## Section 9. Physical and chemical properties

	HS Capture Solution	hot water. 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	Easily soluble in the following materials: cold water and hot water.
	Primer 2	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 ILM Indexing Plate	Easily soluble in the following materials: cold water and hot water.
	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.
	HaloPlex HS Probe ILM	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	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.	
HaloPlex HS Probe ILM	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.	

## Section 9. Physical and chemical properties

	HS Wash 2 Solution	Not available.
	Primer 1	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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	Not available.
	Primer 2	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 ILM Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
	HaloPlex HS Probe ILM	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.
	HS Wash 2 Solution	No specific test data related to reactivity available for this product or its ingredients.
	Primer 1	No specific test data related to reactivity available for this product or its ingredients.
	Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: 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	The product is stable.
	Primer 2	The product is stable.
	HS Elution Buffer	The product is stable.
	Herculase II Fusion DNA	The product is stable.

## Section 10. Stability and reactivity

Polymerase	The product is stable.
Herculase II Reaction Buffer	The product is stable.
100 mM dNTP Mix	The product is stable.
HaloPlex HS ILM Indexing Plate	The product is stable.
Enzyme Strip 1	The product is stable.
Enzyme Strip 2	The product is stable.
HaloPlex HS Probe ILM	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.
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	Under normal conditions of storage and use, hazardous reactions will not occur.
Primer 2	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	Under normal conditions of storage and use, hazardous reactions will not occur.
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 ILM 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.
HaloPlex HS Probe ILM	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.

## Section 10. Stability and reactivity

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	No specific data.
Primer 2	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 ILM Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
HaloPlex HS Probe ILM	No specific data.

<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	May react or be incompatible with oxidizing materials.
		Primer 2	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 ILM 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.
		HaloPlex HS Probe ILM	May react or be incompatible with oxidizing materials.

## Section 10. Stability and reactivity

<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, hazardous decomposition products should not be produced.
	HS Ligation Solution	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	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Primer 2	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 ILM 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.

## Section 10. Stability and reactivity

HaloPlex HS Probe ILM

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

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<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	-

## Section 11. Toxicological information

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 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	-



## Section 11. Toxicological information

	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
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### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	Category 3	Not applicable.	Respiratory tract irritation
<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.

<b>Information on the likely routes of exposure</b>	<ul style="list-style-type: none"> <li>: RE Buffer</li> <li>BSA Solution</li> <li>Enrichment Control DNA Hybridization Solution</li> <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> <li>HS Wash 1 Solution</li> <li>HS Wash 2 Solution</li> <li>Primer 1</li> <li>Primer 2</li> <li>HS Elution Buffer</li> <li>Herculase II Fusion DNA Polymerase</li> </ul>	<ul style="list-style-type: none"> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Routes of entry anticipated: Oral, Dermal, Inhalation.</li> <li>Routes of entry anticipated: Oral, Dermal, Inhalation.</li> <li>Not available.</li> <li>Not available.</li> <li>Routes of entry anticipated: Oral, Dermal, Inhalation.</li> <li>Routes of entry anticipated: Oral, Dermal, Inhalation.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Not available.</li> <li>Routes of entry anticipated: Oral, Dermal, Inhalation.</li> </ul>
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## Section 11. Toxicological information

Herculase II Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
100 mM dNTP Mix	Not available.
HaloPlex HS ILM Indexing Plate	Not available.
Enzyme Strip 1	Routes of entry anticipated: Oral, Dermal, Inhalation.
Enzyme Strip 2	Routes of entry anticipated: Oral, Dermal, Inhalation.
HaloPlex HS Probe ILM	Not available.

### 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	No known significant effects or critical hazards.
Primer 2	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.

#### Inhalation

: Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ILM Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	Causes eye irritation.
Enzyme Strip 2	Causes eye irritation.
HaloPlex HS Probe ILM	No known significant effects or critical hazards.
: 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	May cause respiratory irritation.
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	No known significant effects or critical hazards.
Primer 2	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 ILM 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.
HaloPlex HS Probe ILM	No known significant effects or critical hazards.



## Section 11. Toxicological information

	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	No specific data.
	Primer 2	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 ILM 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
	HaloPlex HS Probe ILM	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	Adverse symptoms may include the following: respiratory tract irritation coughing
	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	No specific data.
	Primer 2	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 ILM Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.

## Section 11. Toxicological information

<b>Skin contact</b>	HaloPlex HS Probe ILM	No specific data.
	: 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	No specific data.
	Primer 2	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 ILM Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.	
HaloPlex HS Probe ILM	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	No specific data.
	Primer 2	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 ILM Indexing Plate	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
HaloPlex HS Probe ILM	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.



## Section 11. Toxicological information

<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	No known significant effects or critical hazards.
		Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	No known significant effects or critical hazards.	
<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	No known significant effects or critical hazards.
		Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	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	No known significant effects or critical hazards.
		Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	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	No known significant effects or critical hazards.
	Primer 2	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 ILM 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.
	HaloPlex HS Probe ILM	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

<b>Route</b>	<b>ATE value</b>
<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>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  Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water  Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
<b>HS Ligation Solution</b> Sodium chloride	Acute EC50 4.74 g/L Fresh water  Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water  Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
<b>HS DNA Ligase</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>HS Capture Solution</b> Sodium chloride	Acute EC50 4.74 g/L Fresh water  Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water  Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

## Section 12. Ecological information

<b>Herculase II Reaction Buffer</b> Ammonium sulphate	Acute LC50 2.6 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Young	48 hours
	Acute LC50 14000 µg/l Fresh water	Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 68 µg/l Fresh water	Fish - Oncorhynchus gorbuscha - Alevin	96 hours
	Chronic NOEC 7.5 mg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
Trometamol	Chronic NOEC 143 µg/l Marine water	Fish - Salmo salar - Post-smolt	5 weeks
	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours
<b>Enzyme Strip 1</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<b>Enzyme Strip 2</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>BSA Solution</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>HS DNA Ligase</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Enzyme Strip 1</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>Enzyme Strip 2</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

## Section 12. Ecological information

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>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.

## Section 13. Disposal considerations

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

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

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

## Section 15. Regulatory information

<b>Classification</b>	: 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 Primer 2 HS Elution Buffer Herculase II Fusion DNA Polymerase Herculase II Reaction Buffer 100 mM dNTP Mix HaloPlex HS ILM Indexing Plate Enzyme Strip 1 Enzyme Strip 2 HaloPlex HS Probe ILM	Not applicable. Not applicable. Not applicable. EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 Not applicable. Not applicable. EYE IRRITATION - Category 2B EYE IRRITATION - Category 2A Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. EYE IRRITATION - Category 2B Not applicable. Not applicable. Not applicable. EYE IRRITATION - Category 2B EYE IRRITATION - Category 2B Not applicable.
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### Composition/information on ingredients

Name	%	Classification
<b>RE Buffer</b> potassium acetate	≤3	COMBUSTIBLE DUSTS
<b>BSA Solution</b> Glycerol	<10	EYE IRRITATION - Category 2A
<b>Hybridization Solution</b> Formamide	≥25 - ≤50	EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B
Sodium chloride	≥10 - ≤25	EYE IRRITATION - Category 2A
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	≥25 - ≤50	EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
<b>HS Ligation Solution</b> Sodium chloride	≤3	EYE IRRITATION - Category 2A
<b>HS DNA Ligase</b> Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
<b>HS Capture Solution</b> Acetic acid, (ethylenedinitrilo) tetra-, disodium salt, dihydrate	<10	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Sodium chloride	≤3	EYE IRRITATION - Category 2A

## Section 15. Regulatory information

<b>Herculase II Fusion DNA Polymerase</b> Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
<b>Herculase II Reaction Buffer</b> Ammonium sulphate Trometamol	≤3 ≤3	EYE IRRITATION - Category 2A COMBUSTIBLE DUSTS SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
<b>Enzyme Strip 1</b> Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
<b>Enzyme Strip 2</b> Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A

### 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

- Australia** :  Not determined.
- Canada** :  Not determined.
- China** : Not determined.
- Europe** : Not determined.
- Japan** :  **Japan inventory (ENCS)**: Not determined.  
**Japan inventory (ISHL)**: Not determined.

## Section 15. Regulatory information

<b>Malaysia</b>	: <input checked="" type="checkbox"/> Not determined.
<b>New Zealand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: 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>	: Not determined.
<b>Viet Nam</b>	: <input checked="" type="checkbox"/> Not determined.

## Section 16. Other information

### History

<b>Date of issue</b>	: 02/14/2018
<b>Date of previous issue</b>	: 04/27/2016
<b>Version</b>	: 4

### Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> <b>Hybridization Solution</b> EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 1B	Calculation method Calculation method
<b>HS Hybridization Stop Solution</b> EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method Calculation method
<b>HS DNA Ligase</b> EYE IRRITATION - Category 2B	Calculation method
<b>HS Capture Solution</b> EYE IRRITATION - Category 2A	Calculation method
<b>Herculase II Fusion DNA Polymerase</b> EYE IRRITATION - Category 2B	Calculation method
<b>Enzyme Strip 1</b> EYE IRRITATION - Category 2B	Calculation method
<b>Enzyme Strip 2</b> EYE IRRITATION - Category 2B	Calculation method

Indicates information that has changed from previously issued version.

### Notice to reader

**Disclaimer:** The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.