

# SAFETY DATA SHEET



HaloPlex HS Prepack Reagents - ION - 96 reactions, Part Number 5190-8634

## Section 1. Identification

<b>Product identifier</b>	: HaloPlex HS Prepack Reagents - ION - 96 reactions, Part Number 5190-8634	
<b>Part no. (chemical kit)</b>	: 5190-8634	
<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 ION	5190-7813
	Primer 2 ION	5190-7814
	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 ION Indexing Plate	5190-8834
	Enzyme Strip 1	5190-7974
	Enzyme Strip 2	5190-7975

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

<b>Material uses</b>	:	Analytical reagent.
	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 ION	0.575 ml (96 reactions)
	Primer 2 ION	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 ION Indexing Plate	48 x 0.015 ml (48 reactions)
	Enzyme Strip 1	0.4 ml (96 reactions)
	Enzyme Strip 2	0.4 ml (96 reactions)

**Supplier/Manufacturer** : Agilent Technologies Australia Pty Ltd  
679 Springvale Road  
Mulgrave  
Victoria 3170, Australia  
1800 802 402

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(61)-290372994

## Section 2. Hazard(s) identification

### Classification of the substance or mixture

#### Hybridization Solution

H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
H360	REPRODUCTIVE TOXICITY (Unborn child) - Category 1B
H361	REPRODUCTIVE TOXICITY (Fertility) - Category 2
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

#### HS Capture Solution

H319	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
<input checked="" type="checkbox"/> 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%
Hybridization Solution	Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30%
HS Hybridization Stop Solution	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
HS Ligation Solution	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
HS DNA Ligase	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
HS Capture Solution	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
Herculase II Fusion DNA Polymerase	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
Herculase II Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
100 mM dNTP Mix	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
	Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
Enzyme Strip 1	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
Enzyme Strip 2	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
<input checked="" type="checkbox"/> BSA Solution	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1%
HS Capture Solution	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 9.4%
100 mM dNTP Mix	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5.4%

### GHS label elements

## Section 2. Hazard(s) identification

### Hazard pictograms

: Hybridization 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	No signal word.
10 mM rATP	No signal word.
HS Ligation Solution	No signal word.
HS DNA Ligase	No signal word.
HS Capture Solution	WARNING
HS Wash 1 Solution	No signal word.
HS Wash 2 Solution	No signal word.
Primer 1 ION	No signal word.
Primer 2 ION	No signal word.
HS Elution Buffer	No signal word.
Herculase II Fusion DNA Polymerase	No signal word.
Herculase II Reaction Buffer	No signal word.
100 mM dNTP Mix	No signal word.
HaloPlex HS ION Indexing Plate	No signal word.
Enzyme Strip 1	No signal word.
Enzyme Strip 2	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. H360 - May damage the unborn child. H361 - Suspected of damaging fertility. H373 - May cause damage to organs through prolonged or repeated exposure.
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	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 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.

### Precautionary statements

## Section 2. Hazard(s) identification

<b>Prevention</b>	:	RE Buffer	Not applicable.
		BSA Solution	Not applicable.
		Enrichment Control DNA	Not applicable.
		Hybridization Solution	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear eye or face protection. P260 - Do not breathe vapour. P264 - Wash hands thoroughly after handling. 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	P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.
		HS Wash 1 Solution	Not applicable.
		HS Wash 2 Solution	Not applicable.
		Primer 1 ION	Not applicable.
		Primer 2 ION	Not applicable.
		HS Elution Buffer	Not applicable.
		Herculase II Fusion DNA Polymerase	Not applicable.
		Herculase II Reaction Buffer	Not applicable.
		100 mM dNTP Mix	Not applicable.
		HaloPlex HS ION Indexing Plate	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
<b>Response</b>	:	RE Buffer	Not applicable.
		BSA Solution	Not applicable.
		Enrichment Control DNA	Not applicable.
		Hybridization Solution	P314 - Get medical attention if you feel unwell. P308 + P313 - IF exposed or concerned: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
		HS Hybridization Stop Solution	Not applicable.
		10 mM rATP	Not applicable.
		HS Ligation Solution	Not applicable.
		HS DNA Ligase	Not applicable.
		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 ION	Not applicable.
		Primer 2 ION	Not applicable.
		HS Elution Buffer	Not applicable.
		Herculase II Fusion DNA Polymerase	Not applicable.
		Herculase II Reaction Buffer	Not applicable.
		100 mM dNTP Mix	Not applicable.
		HaloPlex HS ION Indexing Plate	Not applicable.

## Section 2. Hazard(s) identification

	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
<b>Storage</b>	: RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	P405 - Store locked up.
	HS Hybridization Stop Solution	Not applicable.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.
	HS Capture Solution	Not applicable.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
<b>Disposal</b>	: RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	HS Hybridization Stop Solution	Not applicable.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.
	HS Capture Solution	Not applicable.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	Not applicable.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
<b>Supplemental label elements</b>		
<b>Additional warning phrases</b>	: RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	Not applicable.
	HS Hybridization Stop Solution	Not applicable.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	Not applicable.
	HS Capture Solution	Not applicable.

## Section 2. Hazard(s) identification

HS Wash 1 Solution	Not applicable.
HS Wash 2 Solution	Not applicable.
Primer 1 ION	Not applicable.
Primer 2 ION	Not applicable.
HS Elution Buffer	Not applicable.
Herculase II Fusion DNA Polymerase	Not applicable.
Herculase II Reaction Buffer	Not applicable.
100 mM dNTP Mix	Not applicable.
HaloPlex HS ION Indexing Plate	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.

### Other hazards which do not result in classification

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

## Section 3. Composition and ingredient information

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

## Section 3. Composition and ingredient information

### [CAS number/other identifiers](#)

Ingredient name	% (w/w)	CAS number
<b>BSA Solution</b> Glycerol	≤10	56-81-5
<b>Hybridization Solution</b> Formamide	≥30 - ≤60	75-12-7
Sodium chloride	≥10 - ≤30	7647-14-5
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	≥30 - ≤60	25322-68-3
<b>HS DNA Ligase</b> Glycerol	≥30 - ≤60	56-81-5
<b>HS Capture Solution</b> Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	<10	6381-92-6
Sodium chloride	≤3	7647-14-5
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	≥30 - ≤60	56-81-5
<b>Enzyme Strip 1</b> Glycerol	≥30 - ≤60	56-81-5
<b>Enzyme Strip 2</b> Glycerol	≥30 - ≤60	56-81-5

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

### [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. Get medical attention if irritation occurs.
	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. Get medical attention if irritation occurs.
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 ION	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Primer 2 ION	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
HS Elution Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Herculase II Fusion DNA Polymerase	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Herculase II Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
100 mM dNTP Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
HaloPlex HS ION Indexing Plate	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Enzyme Strip 1	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Enzyme Strip 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.
<b>Inhalation</b>	
: RE Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
BSA Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be



## Section 4. First aid measures

	delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Enrichment Control DNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Hybridization Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory 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.
HS Hybridization Stop Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
10 mM rATP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HS Ligation Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HS DNA Ligase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
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 ION	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Primer 2 ION	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HS Elution Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Herculase II Fusion DNA Polymerase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

## Section 4. First aid measures

	Herculase II Reaction Buffer	attention if symptoms occur. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	100 mM dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	HaloPlex HS ION Indexing Plate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Enzyme Strip 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Enzyme Strip 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
<b>Skin contact</b>	: 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.
	10 mM rATP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	HS Ligation Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	HS DNA Ligase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	HS Capture Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	HS Wash 1 Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	HS Wash 2 Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Primer 1 ION	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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

## Section 4. First aid measures

	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.
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.
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 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 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 ION	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 2 ION	Wash out mouth with water. Remove victim to fresh

## Section 4. First aid measures

	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 Elution Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Herculase II Fusion DNA Polymerase	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.
Herculase II Reaction 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.
100 mM dNTP Mix	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.
HaloPlex HS ION Indexing Plate	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.
Enzyme Strip 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 medical attention if symptoms occur.
Enzyme Strip 2	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.

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

#### Potential acute health effects

## Section 4. First aid measures

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

## Section 4. First aid measures

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

### Over-exposure signs/symptoms

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

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



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HS DNA Ligase	No specific data.
HS Capture Solution	No specific data.
HS Wash 1 Solution	No specific data.
HS Wash 2 Solution	No specific data.
Primer 1 ION	No specific data.
Primer 2 ION	No specific data.
HS Elution Buffer	No specific data.
Herculase II Fusion DNA Polymerase	No specific data.
Herculase II Reaction Buffer	No specific data.
100 mM dNTP Mix	No specific data.
HaloPlex HS ION Indexing Plate	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.

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

#### Notes to physician

: <input checked="" type="checkbox"/> RE Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
BSA Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Enrichment Control DNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Hybridization Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
HS Hybridization Stop Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
10 mM rATP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
HS Ligation Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
HS DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
HS Capture Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
HS Wash 1 Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
HS Wash 2 Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Primer 1 ION	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Primer 2 ION	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
HS Elution Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Herculase II Fusion DNA	Treat symptomatically. Contact poison treatment

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Polymerase	specialist immediately if large quantities have been ingested or inhaled.
Herculase II Reaction Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
100 mM dNTP Mix	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
HaloPlex HS ION Indexing Plate	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Enzyme Strip 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Enzyme Strip 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

### Specific treatments

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

### Protection of first-aiders

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

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HS Capture Solution	or without suitable training. 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 ION	No action shall be taken involving any personal risk or without suitable training.
Primer 2 ION	No action shall be taken involving any personal risk or without suitable training.
HS Elution Buffer	No action shall be taken involving any personal risk or without suitable training.
Herculase II Fusion DNA Polymerase	No action shall be taken involving any personal risk or without suitable training.
Herculase II Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
100 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
HaloPlex HS ION Indexing Plate	No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### 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 ION	Use an extinguishing agent suitable for the surrounding fire.
Primer 2 ION	Use an extinguishing agent suitable for the surrounding fire.
HS Elution Buffer	Use an extinguishing agent suitable for the surrounding fire.
Herculase II Fusion DNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.

## Section 5. Firefighting measures

	Herculase II Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
	100 mM dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
	HaloPlex HS ION Indexing Plate	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 1	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 2	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: RE Buffer	None known.
	BSA Solution	None known.
	Enrichment Control DNA	None known.
	Hybridization Solution	None known.
	HS Hybridization Stop Solution	None known.
	10 mM rATP	None known.
	HS Ligation Solution	None known.
	HS DNA Ligase	None known.
	HS Capture Solution	None known.
	HS Wash 1 Solution	None known.
	HS Wash 2 Solution	None known.
	Primer 1 ION	None known.
	Primer 2 ION	None known.
	HS Elution Buffer	None known.
	Herculase II Fusion DNA Polymerase	None known.
	Herculase II Reaction Buffer	None known.
	100 mM dNTP Mix	None known.
	HaloPlex HS ION Indexing Plate	None known.
	Enzyme Strip 1	None known.
	Enzyme Strip 2	None known.
<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 ION	In a fire or if heated, a pressure increase will occur and the container may burst.
	Primer 2 ION	In a fire or if heated, a pressure increase will occur and the container may burst.
	HS Elution Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.

## Section 5. Firefighting measures

### Hazardous thermal decomposition products

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

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		carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
	100 mM dNTP Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	HaloPlex HS ION Indexing Plate	No specific data.
	Enzyme Strip 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Enzyme Strip 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide
<b>Special protective actions for fire-fighters</b>	: 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

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		action shall be taken involving any personal risk or without suitable training.
	Primer 1 ION	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Primer 2 ION	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	HS Elution Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Herculase II Fusion DNA Polymerase	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Herculase II Reaction Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	100 mM dNTP Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	HaloPlex HS ION Indexing Plate	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Enzyme Strip 1	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	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.
<b>Special protective equipment for fire-fighters</b>	: RE Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	BSA Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Enrichment Control DNA	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Hybridization Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Hybridization Stop Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10 mM rATP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	HS Ligation Solution	Fire-fighters should wear appropriate protective

## Section 5. Firefighting measures

	equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS DNA Ligase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Capture Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Wash 1 Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Wash 2 Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Primer 1 ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Primer 2 ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive 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 ION Indexing Plate	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Enzyme Strip 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Enzyme Strip 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: RE Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt 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 spilt 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 spilt 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 spilt material. Avoid breathing vapour 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 spilt material. 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 spilt 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 spilt material. Put on appropriate personal protective equipment.
	HS DNA Ligase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. 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 spilt material. Avoid breathing vapour 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

## Section 6. Accidental release measures

	through spilt 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 spilt material. Put on appropriate personal protective equipment.
Primer 1 ION	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Primer 2 ION	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 spilt 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 spilt 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 spilt material. Put on appropriate personal protective equipment.
Herculase II Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
100 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
HaloPlex HS ION Indexing Plate	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt 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 spilt material. 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 spilt material. Put on appropriate personal protective equipment.

## Section 6. Accidental release measures

<b>For emergency responders</b> :	RE Buffer	If specialised 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 specialised 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 specialised 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 specialised 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 specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10 mM rATP	If specialised 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 specialised 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 specialised 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 specialised 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 specialised 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 specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Primer 1 ION	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Primer 2 ION	If specialised 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 specialised 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 specialised 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 specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the

## Section 6. Accidental release measures

100 mM dNTP Mix	information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HaloPlex HS ION Indexing Plate	If specialised 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 specialised 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 specialised 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".

<b>Environmental precautions</b> : RE Buffer	Avoid dispersal of spilt 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 spilt 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 spilt 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 spilt 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 spilt 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 spilt 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 spilt 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 spilt 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 spilt 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).

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HS Wash 1 Solution	Avoid dispersal of spilt 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 spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 1 ION	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 2 ION	Avoid dispersal of spilt 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 spilt 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 spilt 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 spilt 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 spilt 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 ION Indexing Plate	Avoid dispersal of spilt 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 spilt 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 spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### [Methods and material 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.
HS Wash 2 Solution		Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an

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

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	: RE Buffer	Put on appropriate personal protective equipment (see Section 8).
	BSA Solution	Put on appropriate personal protective equipment (see Section 8).
	Enrichment Control DNA	Put on appropriate personal protective equipment (see Section 8).
	Hybridization Solution	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. 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).
	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).
	HS Capture Solution	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	HS Wash 1 Solution	Put on appropriate personal protective equipment (see Section 8).
	HS Wash 2 Solution	Put on appropriate personal protective equipment (see Section 8).
	Primer 1 ION	Put on appropriate personal protective equipment (see Section 8).
	Primer 2 ION	Put on appropriate personal protective equipment (see Section 8).
	HS Elution Buffer	Put on appropriate personal protective equipment (see Section 8).
	Herculase II Fusion DNA Polymerase	Put on appropriate personal protective equipment (see Section 8).
	Herculase II Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
	100 mM dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
	HaloPlex HS ION Indexing Plate	Put on appropriate personal protective equipment (see Section 8).
	Enzyme Strip 1	Put on appropriate personal protective equipment (see Section 8).
	Enzyme Strip 2	Put on appropriate personal protective equipment (see Section 8).



## Section 7. Handling and storage

### 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.

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.

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

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

**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 unlabelled 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 unlabelled 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
HS Hybridization Stop Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and

## Section 7. Handling and storage

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

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Primer 1 ION

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 unlabelled 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Primer 2 ION

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

Herculase II Fusion DNA Polymerase

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

Herculase II Reaction Buffer

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

## Section 7. Handling and storage

100 mM dNTP Mix

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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

HaloPlex HS ION Indexing Plate

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

Enzyme Strip 2

Storage temperature: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls and personal protection

### [Control parameters](#)

### [Occupational exposure limits](#)

Ingredient name	Exposure limits
<b>BSA Solution</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Hybridization Solution</b> Formamide	<b>Safe Work Australia (Australia, 1/2014).</b> <b>Absorbed through skin.</b> TWA: 18 mg/m <sup>3</sup> 8 hours.

## Section 8. Exposure controls and personal protection

	TWA: 10 ppm 8 hours.
<b>HS Hybridization Stop Solution</b> Polyethylene glycol	<b>DFG MAC-values list (Germany, 7/2015).</b> PEAK: 8000 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Form: Inhalable fraction TWA: 1000 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction
<b>HS DNA Ligase</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Herculase II Fusion DNA Polymerase</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Enzyme Strip 1</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
<b>Enzyme Strip 2</b> Glycerol	<b>Safe Work Australia (Australia, 1/2014).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.

### Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapour 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: safety glasses with side-shields.

#### Skin protection

##### Hand protection

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

##### Body protection

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

##### Other skin protection

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

## Section 8. Exposure controls and personal protection

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

## Section 9. Physical and chemical properties

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



## Section 9. Physical and chemical properties

	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
<b>Odour threshold</b>	: RE Buffer	Not available.
	BSA Solution	Not available.
	Enrichment Control DNA	Not available.
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	Not available.
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	Not available.
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	Not available.
	Herculase II Fusion DNA Polymerase	Not available.
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
<b>pH</b>	: RE Buffer	7.9
	BSA Solution	7
	Enrichment Control DNA	Not available.
	Hybridization Solution	7.5
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	7
	HS Ligation Solution	8
	HS DNA Ligase	7.5
	HS Capture Solution	7.5
	HS Wash 1 Solution	Not available.
	HS Wash 2 Solution	8.5
	Primer 1 ION	Not available.
	Primer 2 ION	Not available.
	HS Elution Buffer	8.5
	Herculase II Fusion DNA Polymerase	8.2
	Herculase II Reaction Buffer	10
	100 mM dNTP Mix	7.5
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	7.4
	Enzyme Strip 2	Not available.

## Section 9. Physical and chemical properties

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

## Section 9. Physical and chemical properties

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

## Section 9. Physical and chemical properties

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

## Section 9. Physical and chemical properties

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

## Section 9. Physical and chemical properties

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

## Section 9. Physical and chemical properties

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

## Section 10. Stability and reactivity

<b>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 ION	No specific test data related to reactivity available for this product or its ingredients.
	Primer 2 ION	No specific test data related to reactivity available for this product or its ingredients.
	HS Elution Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Herculase II Fusion DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
	Herculase II Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.

## Section 10. Stability and reactivity

100 mM dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
HaloPlex HS ION Indexing Plate	No specific test data related to reactivity available for this product or its ingredients.
Enzyme Strip 1	No specific test data related to reactivity available for this product or its ingredients.
Enzyme Strip 2	No specific test data related to reactivity available for this product or its ingredients.

### Chemical stability

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

### 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 ION	Under normal conditions of storage and use, hazardous reactions will not occur.
Primer 2 ION	Under normal conditions of storage and use, hazardous reactions will not occur.
HS Elution Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
Herculase II Fusion DNA	Under normal conditions of storage and use,



## Section 10. Stability and reactivity

Polymerase	hazardous reactions will not occur.
Herculase II Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
100 mM dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
HaloPlex HS ION Indexing Plate	Under normal conditions of storage and use, hazardous reactions will not occur.
Enzyme Strip 1	Under normal conditions of storage and use, hazardous reactions will not occur.
Enzyme Strip 2	Under normal conditions of storage and use, hazardous reactions will not occur.

### Conditions to avoid

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

### Incompatible materials

: RE Buffer	May react or be incompatible with oxidising materials.
BSA Solution	May react or be incompatible with oxidising materials.
Enrichment Control DNA	May react or be incompatible with oxidising materials.
Hybridization Solution	May react or be incompatible with oxidising materials.
HS Hybridization Stop Solution	May react or be incompatible with oxidising materials.
10 mM rATP	May react or be incompatible with oxidising materials.
HS Ligation Solution	May react or be incompatible with oxidising materials.
HS DNA Ligase	May react or be incompatible with oxidising materials.
HS Capture Solution	May react or be incompatible with oxidising materials.
HS Wash 1 Solution	May react or be incompatible with oxidising materials.
HS Wash 2 Solution	May react or be incompatible with oxidising materials.
Primer 1 ION	May react or be incompatible with oxidising materials.
Primer 2 ION	May react or be incompatible with oxidising materials.
HS Elution Buffer	May react or be incompatible with oxidising materials.
Herculase II Fusion DNA Polymerase	May react or be incompatible with oxidising materials.
Herculase II Reaction Buffer	May react or be incompatible with oxidising materials.
100 mM dNTP Mix	May react or be incompatible with oxidising materials.
HaloPlex HS ION Indexing Plate	May react or be incompatible with oxidising materials.
Enzyme Strip 1	May react or be incompatible with oxidising materials.
Enzyme Strip 2	May react or be incompatible with oxidising materials.

## Section 10. Stability and reactivity

<b>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 ION	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Primer 2 ION	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	HS Elution Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Herculase II Fusion DNA Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Herculase II Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM dNTP Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	HaloPlex HS ION Indexing Plate	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Enzyme Strip 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Enzyme Strip 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 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 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>Enzyme Strip 1</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>Enzyme Strip 2</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-

#### Irritation/Corrosion

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

## Section 11. Toxicological information

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>Enzyme Strip 1</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Enzyme Strip 2</b> Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

### Sensitisation

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 Capture Solution</b> Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>Hybridization Solution</b> Formamide	Category 2	Not determined	Not determined

### Aspiration hazard

Not available.

## Section 11. Toxicological information

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

### Potential acute health effects

#### **Eye contact**

<b>:</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	Causes serious eye irritation.
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	Causes serious eye irritation.
HS Wash 1 Solution	No known significant effects or critical hazards.
HS Wash 2 Solution	No known significant effects or critical hazards.
Primer 1 ION	No known significant effects or critical hazards.
Primer 2 ION	No known significant effects or critical hazards.
HS Elution Buffer	No known significant effects or critical hazards.
Herculase II Fusion DNA Polymerase	No known significant effects or critical hazards.
Herculase II Reaction Buffer	No known significant effects or critical hazards.
100 mM dNTP Mix	No known significant effects or critical hazards.
HaloPlex HS ION Indexing Plate	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.

#### **Inhalation**

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

## Section 11. Toxicological information

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

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

## Section 11. Toxicological information

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

## Section 11. Toxicological information

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

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects



## Section 11. Toxicological information

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

## Section 11. Toxicological information

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

## Section 11. Toxicological information

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

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
<b>HS Capture Solution</b>	
Oral	5319.1 mg/kg
Dermal	11702.1 mg/kg
Inhalation (vapours)	117 mg/l

## Section 12. Ecological information

### Toxicity

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

## Section 12. Ecological information

<b>Herculase II Fusion DNA Polymerase</b> Glycerol	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	Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	48 hours 96 hours 96 hours 3 weeks
	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
<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

### 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	-	-

### Bioaccumulative potential

## Section 12. Ecological information

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>Enzyme Strip 1</b> Glycerol	-1.76	-	low
<b>Enzyme Strip 2</b> Glycerol	-1.76	-	low

### Mobility in soil

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

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

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

**ADG / IMDG / IATA** : Not regulated as Dangerous Goods according to the ADG Code .

**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

### Standard Uniform Schedule of Medicine and Poisons

Not regulated.

### Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

### 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

<b>Australia</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Canada</b>	: <input checked="" type="checkbox"/> Not determined.
<b>China</b>	: Not determined.
<b>Europe</b>	: Not determined.
<b>Japan</b>	: <input checked="" type="checkbox"/> <b>Japan inventory (ENCS):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>Malaysia</b>	: <input checked="" type="checkbox"/> Not determined.
<b>New Zealand</b>	: <input checked="" type="checkbox"/> Not determined.
<b>Philippines</b>	: 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. Any other relevant information

### History

**Date of issue/Date of revision** : 09/02/2018

**Date of previous issue** : 26/04/2016

**Version** : 3

### Key to abbreviations

ADG = Australian Dangerous Goods  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 NOHSC = National Occupational Health and Safety Commission

**Section 16. Any other relevant information**

SUSMP = Standard Uniform Schedule of Medicine and Poisons  
 UN = United Nations

**Procedure used to derive the classification**

Classification	Justification
<b>Hybridization Solution</b> Eye Irrit. 2A, H319 Repr. 1B, H360 (Unborn child) Repr. 2, H361 (Fertility) STOT RE 2, H373  <b>HS Capture Solution</b> Eye Irrit. 2A, H319	Calculation method Calculation method Calculation method Calculation method  Calculation method

**References** : Not available.

✔ Indicates information that has changed from previously issued version.

**Notice to reader**

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