

SAFETY DATA SHEET



HaloPlex HS Target Enrichment Kits - ION - 48 reactions

Section 1. Identification

1.1 Product identifier

Product name	: HaloPlex HS Target Enrichment Kits - ION - 48 reactions
Part No. (Chemical Kit)	: G9932C, G9942C
Part No.	: <input checked="" type="checkbox"/> E Buffer 5190-7952
	BSA Solution 5190-7953
	Enrichment Control DNA 5190-7956
	Hybridization Solution 5190-7957
	HS Hybridization Stop Solution 5190-7958
	10 mM rATP 5190-7959
	HS Ligation Solution 5190-7960
	HS DNA Ligase 5190-7961
	HS Capture Solution 5190-7962
	HS Wash 1 Solution 5190-7963
	HS Wash 2 Solution 5190-7964
	Primer 1 ION 5190-7811
	Primer 2 ION 5190-7812
	HS Elution Buffer 5190-7967
	Herculase II Fusion DNA Polymerase 5190-7968
	Herculase II Reaction Buffer 5190-7969
	100 mM dNTP Mix 5190-7970
	HaloPlex HS ION Indexing Plate 5190-8834
	Enzyme Strip 1 5190-7954
	Enzyme Strip 2 5190-7955
	HaloPlex HS ION Probe 5190-7863 / 5190-7865 / 5190-7867 / 5190-7869

Validation date : 4/29/2016

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

Material uses	: Analytical reagent.
	<input checked="" type="checkbox"/> E Buffer 1.7 ml (48 reactions)
	BSA Solution 0.04 ml (48 reactions)
	Enrichment Control DNA 0.31 ml (48 reactions)
	Hybridization Solution 2.5 ml (48 reactions)
	HS Hybridization Stop Solution 1.9 ml (48 reactions)
	10 mM rATP 0.02 ml (48 reactions)
	HS Ligation Solution 0.72 ml (48 reactions)
	HS DNA Ligase 0.18 ml (48 reactions)
	HS Capture Solution 2.7 ml (48 reactions)
	HS Wash 1 Solution 6.7 ml (48 reactions)
	HS Wash 2 Solution 10.8 ml (48 reactions)
	Primer 1 ION 0.29 ml (48 reactions)
	Primer 2 ION 2 x 0.29 ml (48 reactions)
	HS Elution Buffer 15 ml (48 reactions)
	Herculase II Fusion DNA Polymerase 0.29 ml (48 reactions)
	Herculase II Reaction Buffer 2.2 ml (48 reactions)
	100 mM dNTP Mix 0.06 ml (48 reactions)
	HaloPlex HS ION Indexing Plate 0.015 ml (96 reactions)
	Enzyme Strip 1 0.2 ml (48 reactions)
	Enzyme Strip 2 0.2 ml (48 reactions)
	HaloPlex HS ION Probe 0.357 ml (48 reactions)

1.3 Details of the supplier of the safety data sheet

Section 1. Identification


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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

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

Section 2. Hazards identification

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

Classification of the substance or mixture

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Hybridization Solution

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

HS Hybridization Stop Solution

H320 EYE IRRITATION - Category 2B

HS DNA Ligase

H320 EYE IRRITATION - Category 2B

HS Capture Solution

H319 EYE IRRITATION - Category 2A

Herculase II Fusion DNA Polymerase

H320 EYE IRRITATION - Category 2B

Enzyme Strip 1

H320 EYE IRRITATION - Category 2B

Enzyme Strip 2

H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity

: RE Buffer	Not applicable.
BSA Solution	Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 1%
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	Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 5.4%
HaloPlex HS ION Indexing Plate	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
HaloPlex HS ION Probe	Not applicable.

2.2 GHS label elements

Hazard pictograms



Signal word

:

Section 2. Hazards identification

	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	P264 - Wash hands thoroughly after handling.
	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	P264 - Wash hands thoroughly after handling.
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	P264 - Wash hands thoroughly after handling.
	Enzyme Strip 2	P264 - Wash hands thoroughly after handling.
	HaloPlex HS ION Probe	Not applicable.
Response	RE Buffer	Not applicable.
	BSA Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Hybridization Solution	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	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.
	10 mM rATP	Not applicable.
	HS Ligation Solution	Not applicable.
	HS DNA Ligase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	HS Capture Solution	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
	HS Wash 1 Solution	Not applicable.
	HS Wash 2 Solution	Not applicable.
	Primer 1 ION	Not applicable.
	Primer 2 ION	Not applicable.
	HS Elution Buffer	Not applicable.
	Herculase II Fusion DNA Polymerase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical

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	Herculase II Reaction Buffer	attention.
	100 mM dNTP Mix	Not applicable.
	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Enzyme Strip 2	P337 + P313 - If eye irritation persists: 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.
	HaloPlex HS ION Probe	Not applicable.
Storage	: 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	Not applicable.
	Polymerase	
	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.
	HaloPlex HS ION Probe	Not applicable.
Disposal	: 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	Not applicable.
	Polymerase	
	Herculase II Reaction Buffer	Not applicable.
	100 mM dNTP Mix	Not applicable.

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Supplemental label elements	HaloPlex HS ION Indexing Plate	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
	HaloPlex HS ION Probe	Not applicable.
	: 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.	
HaloPlex HS ION Probe	None known.	

2.3 Other hazards

Hazards not otherwise classified

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

Section 3. Composition/information on ingredients

Substance/mixture	: 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

Section 3. Composition/information on ingredients

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
HaloPlex HS ION Probe	Mixture

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

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

Section 3. Composition/information on ingredients

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

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

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

Section 4. First aid measures

	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. 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.
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. 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.
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

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Primer 2 ION	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.
HS Elution Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Herculase II Fusion DNA Polymerase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Herculase II Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
100 mM dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
HaloPlex HS ION Indexing Plate	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Enzyme Strip 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Enzyme Strip 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or 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

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Skin contact

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

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		clothing before reuse. Clean shoes thoroughly before reuse.
	Herculase II Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	100 mM dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	HaloPlex HS ION Indexing Plate	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Enzyme Strip 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Enzyme Strip 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	HaloPlex HS ION Probe	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: RE Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	BSA Solution	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Enrichment Control DNA	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Hybridization Solution	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar,

Section 4. First aid measures

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

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	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 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 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.
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

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

[4.2 Most important symptoms/effects, acute and delayed](#)

Section 4. First aid measures

Potential acute health effects

Eye contact

<ul style="list-style-type: none"> RE Buffer BSA Solution Enrichment Control DNA Hybridization Solution HS Hybridization Stop Solution 10 mM rATP HS Ligation Solution HS DNA Ligase HS Capture Solution HS Wash 1 Solution HS Wash 2 Solution Primer 1 ION Primer 2 ION HS Elution Buffer Herculase II Fusion DNA Polymerase Herculase II Reaction Buffer 100 mM dNTP Mix HaloPlex HS ION Indexing Plate Enzyme Strip 1 Enzyme Strip 2 HaloPlex HS ION Probe 	<ul style="list-style-type: none"> No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes serious eye irritation. Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. Causes eye irritation. No known significant effects or critical hazards.
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Inhalation

<ul style="list-style-type: none"> RE Buffer BSA Solution Enrichment Control DNA Hybridization Solution HS Hybridization Stop Solution 10 mM rATP HS Ligation Solution HS DNA Ligase HS Capture Solution HS Wash 1 Solution HS Wash 2 Solution Primer 1 ION Primer 2 ION HS Elution Buffer Herculase II Fusion DNA Polymerase Herculase II Reaction Buffer 100 mM dNTP Mix HaloPlex HS ION Indexing Plate Enzyme Strip 1 Enzyme Strip 2 HaloPlex HS ION Probe 	<ul style="list-style-type: none"> No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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Skin contact

<ul style="list-style-type: none"> RE Buffer BSA Solution Enrichment Control DNA Hybridization Solution HS Hybridization Stop Solution 10 mM rATP HS Ligation Solution HS DNA Ligase HS Capture Solution HS Wash 1 Solution HS Wash 2 Solution Primer 1 ION Primer 2 ION 	<ul style="list-style-type: none"> No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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	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.
	HaloPlex HS ION Probe	No known significant effects or critical hazards.
Ingestion	: 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.
	HaloPlex HS ION Probe	No known significant effects or critical hazards.

Over-exposure signs/symptoms

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

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

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

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

Notes to physician	: RE Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	BSA Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enrichment Control DNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Hybridization Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	HS Hybridization Stop Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10 mM rATP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HS Ligation Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

Section 4. First aid measures

	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.
	HaloPlex HS ION Probe	No specific treatment.
Protection of first-aiders	: RE Buffer	No action shall be taken involving any personal risk or without suitable training.
	BSA Solution	No action shall be taken involving any personal risk or without suitable training.
	Enrichment Control DNA	No action shall be taken involving any personal risk or without suitable training.
	Hybridization Solution	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	HS Hybridization Stop Solution	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	10 mM rATP	No action shall be taken involving any personal risk or without suitable training.
	HS Ligation Solution	No action shall be taken involving any personal risk or without suitable training.
	HS DNA Ligase	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	HS Capture Solution	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Herculase II Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
	100 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
	HaloPlex HS ION Indexing Plate	No action shall be taken involving any personal risk or without suitable training.
	Enzyme Strip 1	No action shall be taken involving any personal risk

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Enzyme Strip 2

or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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.

HaloPlex HS ION Probe

No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

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.

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.

HaloPlex HS ION Probe

Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

Unsuitable extinguishing media	:	RE Buffer	None known.
		BSA Solution	None known.
		Enrichment Control DNA	None known.
		Hybridization Solution	None known.
		HS Hybridization Stop Solution	None known.
		10 mM rATP	None known.
		HS Ligation Solution	None known.
		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.
	HaloPlex HS ION Probe	None known.	

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	:	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.
		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.	

Section 5. Fire-fighting measures

Hazardous thermal decomposition products

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

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100 mM dNTP Mix	nitrogen oxides sulfur oxides metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
HaloPlex HS ION Indexing Plate Enzyme Strip 1	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide
Enzyme Strip 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide
HaloPlex HS ION Probe	No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters

: RE Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
BSA Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Enrichment Control DNA	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hybridization Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Hybridization Stop Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
10 mM rATP	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Ligation Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS DNA Ligase	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Capture Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
HS Wash 1 Solution	Promptly isolate the scene by removing all persons

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from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

HS Wash 2 Solution

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Primer 1 ION

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Primer 2 ION

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

HS Elution Buffer

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Herculase II Fusion DNA Polymerase

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Herculase II Reaction Buffer

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

100 mM dNTP Mix

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

HaloPlex HS ION Indexing Plate

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Enzyme Strip 1

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Enzyme Strip 2

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

HaloPlex HS ION Probe

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: 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.

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Hybridization Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Hybridization Stop Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10 mM rATP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Ligation Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS DNA Ligase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Capture Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Wash 1 Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HS Wash 2 Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Primer 1 ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Primer 2 ION	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive 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

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Enzyme Strip 1	pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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.
HaloPlex HS ION Probe	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: RE Buffer

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

BSA Solution

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

Enrichment Control DNA

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

Hybridization Solution

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

HS Hybridization Stop Solution

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

10 mM rATP

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

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

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Herculase II Reaction Buffer	breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
100 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
HaloPlex HS ION Indexing Plate	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
HaloPlex HS ION Probe	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders : RE Buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
BSA Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Enrichment Control DNA	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Hybridization Solution	If specialized clothing is required to deal with the


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HS Hybridization Stop Solution	spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
10 mM rATP	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HS Ligation Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HS DNA Ligase	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HS Capture Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HS Wash 1 Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HS Wash 2 Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Primer 1 ION	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Primer 2 ION	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HS Elution Buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Herculase II Fusion DNA Polymerase	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Herculase II Reaction Buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
100 mM dNTP Mix	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HaloPlex HS ION Indexing Plate	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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Enzyme Strip 1	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Enzyme Strip 2	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
HaloPlex HS ION Probe	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

:  RE Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
BSA Solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enrichment Control DNA	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Hybridization Solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HS Hybridization Stop Solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
10 mM rATP	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HS Ligation Solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HS DNA Ligase	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HS Capture Solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HS Wash 1 Solution	Avoid dispersal of spilled material and runoff and

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

Section 6. Accidental release measures

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : RE Buffer

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.

Section 6. Accidental release measures

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

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HaloPlex HS ION Probe	<p>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.</p> <p>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.</p>
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Section 7. Handling and storage

7.1 Precautions for safe handling

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

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	alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
HS Wash 1 Solution	Put on appropriate personal protective equipment (see Section 8).
HS Wash 2 Solution	Put on appropriate personal protective equipment (see Section 8).
Primer 1 ION	Put on appropriate personal protective equipment (see Section 8).
Primer 2 ION	Put on appropriate personal protective equipment (see Section 8).
HS Elution Buffer	Put on appropriate personal protective equipment (see Section 8).
Herculase II Fusion DNA Polymerase	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Herculase II Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
100 mM dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
HaloPlex HS ION Indexing Plate	Put on appropriate personal protective equipment (see Section 8).
Enzyme Strip 1	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Enzyme Strip 2	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
HaloPlex HS ION Probe	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:  RE Buffer
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. 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

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Enrichment Control DNA	for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Hybridization Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Hybridization Stop Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
10 mM rATP	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Ligation Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS DNA Ligase	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Capture Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Wash 1 Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HS Wash 2 Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and

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Primer 1 ION	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. 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.
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

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Enzyme Strip 2		before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HaloPlex HS ION Probe		Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	: RE Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
BSA Solution		Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Enrichment Control DNA		Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Hybridization Solution		Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
HS Hybridization Stop Solution		Store in accordance with local regulations. Store in original container protected from direct sunlight in a

Section 7. Handling and storage

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

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

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100 mM dNTP Mix

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

HaloPlex HS ION Indexing Plate

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

Enzyme Strip 1

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

Enzyme Strip 2

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

HaloPlex HS ION Probe

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

[7.3 Specific end use\(s\)](#)

Section 7. Handling and storage

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

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
RE Buffer potassium acetate	None.
BSA Solution Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust

Section 8. Exposure controls/personal protection

Hybridization Solution

Formamide

OSHA PEL (United States, 2/2013).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

ACGIH TLV (United States, 3/2015).

Absorbed through skin.

TWA: 10 ppm 8 hours.

TWA: 18 mg/m³ 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 20 ppm 8 hours.

TWA: 30 mg/m³ 8 hours.

STEL: 30 ppm 15 minutes.

STEL: 45 mg/m³ 15 minutes.

NIOSH REL (United States, 10/2013).

Absorbed through skin.

TWA: 10 ppm 10 hours.

TWA: 15 mg/m³ 10 hours.

None.

Sodium chloride

AIHA WEEL (United States, 10/2011).

TWA: 10 mg/m³ 8 hours. Form: Aerosol

HS Hybridization Stop Solution

Polyethylene glycol

None.

HS Ligation Solution

Sodium chloride

HS DNA Ligase

Glycerol

OSHA PEL 1989 (United States, 3/1989).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 10 mg/m³ 8 hours. Form: Total dust

OSHA PEL (United States, 2/2013).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

HS Capture Solution

Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate

Sodium chloride

None.

None.

Herculase II Fusion DNA Polymerase

Glycerol

OSHA PEL 1989 (United States, 3/1989).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 10 mg/m³ 8 hours. Form: Total dust

OSHA PEL (United States, 2/2013).

TWA: 5 mg/m³ 8 hours. Form: Respirable fraction

TWA: 15 mg/m³ 8 hours. Form: Total dust

Herculase II Reaction Buffer

Ammonium sulphate

Trometamol

None.

None.

100 mM dNTP Mix

Section 8. Exposure controls/personal protection

2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate) 2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	None. None.
Enzyme Strip 1 Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Enzyme Strip 2 Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust

8.2 Exposure controls

Appropriate engineering controls

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

Environmental exposure controls

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

Individual protection measures

Hygiene measures

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

Eye/face protection

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

Skin protection

Hand protection

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

Body protection

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

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	<input checked="" type="checkbox"/> E 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. [Clear.]
		Enzyme Strip 2	Liquid. [Clear.]
	HaloPlex HS ION Probe	Liquid.	
Color	:	<input checked="" type="checkbox"/> E 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	Colorless.
		Enzyme Strip 2	Colorless.
	HaloPlex HS ION Probe	Not available.	

Section 9. Physical and chemical properties

Odor	:	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	Odorless.
		Enzyme Strip 2	Odorless.
	HaloPlex HS ION Probe	Not available.	
Odor threshold	:	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.
	HaloPlex HS ION Probe	Not available.	
pH	:	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	8.2	

Section 9. Physical and chemical properties

	Polymerase	
	Herculase II Reaction Buffer	10
	100 mM dNTP Mix	7.5
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	5.5 to 8
	Enzyme Strip 2	Not available.
	HaloPlex HS ION Probe	Not available.
Melting point	: RE Buffer	0°C (32°F)
	BSA Solution	Not available.
	Enrichment Control DNA	0°C (32°F)
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	0°C (32°F)
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	0°C (32°F)
	HS Wash 2 Solution	0°C (32°F)
	Primer 1 ION	0°C (32°F)
	Primer 2 ION	0°C (32°F)
	HS Elution Buffer	0°C (32°F)
	Herculase II Fusion DNA	Not available.
	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	0°C (32°F)
	Enzyme Strip 1	20°C (68°F)
	Enzyme Strip 2	20°C (68°F)
	HaloPlex HS ION Probe	0°C (32°F)
Boiling point	: RE Buffer	100°C (212°F)
	BSA Solution	Not available.
	Enrichment Control DNA	100°C (212°F)
	Hybridization Solution	Not available.
	HS Hybridization Stop Solution	Not available.
	10 mM rATP	100°C (212°F)
	HS Ligation Solution	Not available.
	HS DNA Ligase	Not available.
	HS Capture Solution	Not available.
	HS Wash 1 Solution	100°C (212°F)
	HS Wash 2 Solution	100°C (212°F)
	Primer 1 ION	100°C (212°F)
	Primer 2 ION	100°C (212°F)
	HS Elution Buffer	100°C (212°F)
	Herculase II Fusion DNA	Not available.
	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	100°C (212°F)
	Enzyme Strip 1	182°C (359.6°F)
	Enzyme Strip 2	182°C (359.6°F)
	HaloPlex HS ION Probe	100°C (212°F)
Flash point	: 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.

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	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	Closed cup: >200°C (>392°F)
	Enzyme Strip 2	Closed cup: 160°C (320°F)
	HaloPlex HS ION Probe	Not available.
Evaporation rate	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.
	HaloPlex HS ION Probe	Not available.
Flammability (solid, gas)	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.
	HaloPlex HS ION Probe	Not applicable.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	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	Lower: 0.9%
	Enzyme Strip 2	Not available.
HaloPlex HS ION Probe	Not available.	
Vapor pressure	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	<0.13 kPa (<1 mm Hg) [room temperature]
	Enzyme Strip 2	<0.13 kPa (<1 mm Hg) [room temperature]
HaloPlex HS ION Probe	Not available.	
Vapor density	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	Not available.	

Section 9. Physical and chemical properties

	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	3.1 [Air = 1]
	Enzyme Strip 2	3.1 [Air = 1]
	HaloPlex HS ION Probe	Not available.
Relative density	: 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	Not available.
	Polymerase	
	Herculase II Reaction Buffer	Not available.
	100 mM dNTP Mix	Not available.
	HaloPlex HS ION Indexing Plate	Not available.
	Enzyme Strip 1	1.262
	Enzyme Strip 2	1.262
	HaloPlex HS ION Probe	Not available.
Solubility	: 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	Soluble in the following materials: cold water and hot water.
	Polymerase	

Section 9. Physical and chemical properties

	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.
	HaloPlex HS ION Probe	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: 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.	
HaloPlex HS ION Probe	Not available.	
Auto-ignition temperature	: 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	370°C (698°F)
Enzyme Strip 2	370°C (698°F)	
HaloPlex HS ION Probe	Not available.	

Section 9. Physical and chemical properties

Decomposition temperature	<input checked="" type="checkbox"/> 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.
HaloPlex HS ION Probe	Not available.	

Viscosity	<input checked="" type="checkbox"/> 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.
HaloPlex HS ION Probe	Not available.	

Section 10. Stability and reactivity

10.1 Reactivity	<input checked="" type="checkbox"/> 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.

Section 10. Stability and reactivity


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.
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.
HaloPlex HS ION Probe	No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability


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

Section 10. Stability and reactivity

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

:  E 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.

Section 10. Stability and reactivity

	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.
	HaloPlex HS ION Probe	No specific data.
10.5 Incompatible materials	RE Buffer	May react or be incompatible with oxidizing materials.
	BSA Solution	May react or be incompatible with oxidizing materials.
	Enrichment Control DNA	May react or be incompatible with oxidizing materials.
	Hybridization Solution	May react or be incompatible with oxidizing materials.
	HS Hybridization Stop Solution	May react or be incompatible with oxidizing materials.
	10 mM rATP	May react or be incompatible with oxidizing materials.
	HS Ligation Solution	May react or be incompatible with oxidizing materials.
	HS DNA Ligase	May react or be incompatible with oxidizing materials.
	HS Capture Solution	May react or be incompatible with oxidizing materials.
	HS Wash 1 Solution	May react or be incompatible with oxidizing materials.
	HS Wash 2 Solution	May react or be incompatible with oxidizing materials.
	Primer 1 ION	May react or be incompatible with oxidizing materials.
	Primer 2 ION	May react or be incompatible with oxidizing materials.
	HS Elution Buffer	May react or be incompatible with oxidizing materials.
	Herculase II Fusion DNA Polymerase	May react or be incompatible with oxidizing materials.
	Herculase II Reaction Buffer	May react or be incompatible with oxidizing materials.
	100 mM dNTP Mix	May react or be incompatible with oxidizing materials.
	HaloPlex HS ION Indexing Plate	May react or be incompatible with oxidizing materials.
	Enzyme Strip 1	May react or be incompatible with oxidizing materials.
	Enzyme Strip 2	May react or be incompatible with oxidizing materials.
	HaloPlex HS ION Probe	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	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.

Section 10. Stability and reactivity

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

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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

Irritation/Corrosion

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

Section 11. Toxicological information

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

[Sensitization](#)

Section 11. Toxicological information

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

RE Buffer	Not available.
BSA Solution	Not available.
Enrichment Control DNA Hybridization Solution	Not available.
HS Hybridization Stop Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.
10 mM rATP	Routes of entry anticipated: Oral, Dermal, Inhalation.
HS Ligation Solution	Not available.
HS DNA Ligase	Not available.
HS Capture Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.
HS Wash 1 Solution	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.

Section 11. Toxicological information

Ingestion	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.
	HaloPlex HS ION Probe	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.	
Enzyme Strip 1	No known significant effects or critical hazards.	
Enzyme Strip 2	No known significant effects or critical hazards.	
HaloPlex HS ION Probe	No known significant effects or critical hazards.	

Symptoms related to the physical, chemical and toxicological characteristics

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

Section 11. Toxicological information

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

Section 11. Toxicological information

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

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

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

Section 12. Ecological information

Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Hybridization Solution Sodium chloride	Acute EC50 2430000 µg/l Fresh water Acute EC50 28.85 mg/dm ³ Fresh water Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1661 mg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Algae - Navicula seminulum Algae - Pseudokirchneriella subcapitata Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 72 hours 48 hours 96 hours 48 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
HS Hybridization Stop Solution Polyethylene glycol	Acute LC50 >1000000 µg/l Fresh water	Fish - Salmo salar - Parr	96 hours
HS Ligation Solution Sodium chloride	Acute EC50 2430000 µg/l Fresh water Acute EC50 28.85 mg/dm ³ Fresh water Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1661 mg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Algae - Navicula seminulum Algae - Pseudokirchneriella subcapitata Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 72 hours 48 hours 96 hours 48 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
HS DNA Ligase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
HS Capture Solution Sodium chloride	Acute EC50 2430000 µg/l Fresh water Acute EC50 28.85 mg/dm ³ Fresh water Acute EC50 519.6 mg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1661 mg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Algae - Navicula seminulum Algae - Pseudokirchneriella subcapitata Crustaceans - Cypris subglobosa Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 72 hours 48 hours 96 hours 48 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
Herculase II Fusion DNA Polymerase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Section 12. Ecological information

Herculase II Reaction Buffer Ammonium sulphate	Acute LC50 2.6 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Young	48 hours
	Acute LC50 14000 to 15000 µg/l Fresh water	Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 68 µg/l Fresh water	Fish - Oncorhynchus gorbuscha - Alevin	96 hours
	Chronic NOEC 7.5 mg/l Marine water	Algae - Phaeodactylum tricornutum - Exponential growth phase	96 hours
Trometamol	Chronic NOEC 143 µg/l Marine water	Fish - Salmo salar - Post-smolt	5 weeks
	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours
Enzyme Strip 1 Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Enzyme Strip 2 Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

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

Section 12. Ecological information

Glycerol	-1.76	-	low
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12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) PAIR**: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-; Formamide

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

Section 15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
RE Buffer potassium acetate	≤3	Yes.	No.	No.	Yes.	No.
BSA Solution Glycerol	<10	No.	No.	No.	Yes.	No.
Hybridization Solution Formamide	≥25 - ≤50	No.	No.	No.	Yes.	Yes.
Sodium chloride	≥10 - ≤25	No.	No.	No.	Yes.	No.
HS Hybridization Stop Solution Polyethylene glycol	≥25 - ≤50	Yes.	No.	No.	Yes.	No.
HS Ligation Solution Sodium chloride	≤3	No.	No.	No.	Yes.	No.
HS DNA Ligase Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
HS Capture Solution Acetic acid, (ethylenedinitrilo)tetra-, disodium salt, dihydrate	<10	No.	No.	No.	Yes.	No.
Sodium chloride	≤3	No.	No.	No.	Yes.	No.
Herculase II Fusion DNA Polymerase Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
Herculase II Reaction Buffer Ammonium sulphate	≤3	No.	No.	No.	Yes.	No.
Trometamol	≤3	Yes.	No.	No.	Yes.	No.
100 mM dNTP Mix 2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate)	≤3	No.	No.	No.	Yes.	No.
2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	≤3	No.	No.	No.	Yes.	No.

Section 15. Regulatory information

Enzyme Strip 1 Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
Enzyme Strip 2 Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	<input checked="" type="checkbox"/> Herculase II Reaction Buffer Ammonium sulphate	7783-20-2	≤3
Supplier notification	<input checked="" type="checkbox"/> Herculase II Reaction Buffer Ammonium sulphate	7783-20-2	≤3

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

State regulations

- Massachusetts** : The following components are listed: GLYCERINE MIST; FORMAMIDE
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; FORMAMIDE
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL; FORMAMIDE
- California Prop. 65**

No products were found.

Canada inventory : Not determined.

International regulations

- International lists** :
- Australia inventory (AICS)**: Not determined.
 - China inventory (IECSC)**: Not determined.
 - Japan inventory (ENCS)**: Not determined.
 - Japan inventory (ISHL)**: Not determined.
 - Korea inventory**: Not determined.
 - Malaysia Inventory (EHS Register)**: Not determined.
 - New Zealand Inventory of Chemicals (NZIoC)**: Not determined.
 - Philippines inventory (PICCS)**: Not determined.
 - Taiwan Chemical Substances Inventory (TCSI)**: All components are listed or exempted.
 - Turkey inventory**: Not determined.

Chemical Weapons : Not listed

Convention List Schedule I Chemicals

Chemical Weapons : Not listed

Convention List Schedule II Chemicals

Chemical Weapons : Not listed

Convention List Schedule III Chemicals

Section 16. Other information

History

Date of issue : 04/29/2016

Date of previous issue : 03/26/2015.

Version : 2

✔ Indicates information that has changed from previously issued version.

Notice to reader

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