

SAFETY DATA SHEET

HaloPlex Prepack Reagents - ION - 48 reactions, Part Number 5190-7815

Section 1. Identification

1.1 Product identifier

Product name	: HaloPlex Prepack Reagents - ION - 48 reactions, Part Number 5190-7815	
Part No. (Chemical Kit)	: 5190-7815	
Part No.	<input checked="" type="checkbox"/> E Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	5190-5956 5190-5960 5190-5963 5190-7829 5190-7832 5190-5953 5190-5954 5190-6196 5190-6197 5190-6198 5190-5951 5190-5957 5190-5961 5190-5962

Validation date : 10/25/2017

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

Material uses	: Analytical reagent.	
	<input checked="" type="checkbox"/> E Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	2.4 ml (48 reactions) 8.15 ml (48 reactions) 0.058 ml (48reactions) 0.17 ml (48reactions) 3.25 ml (48 reactions) 7 ml (48 reactions) 2.4 ml (48 reactions) 0.068 ml (48 reactions) 0.68 ml (48 reactions) 48 x 0.015 ml 3.5 ml (48 reactions) 0.24 ml (48 reactions) 8 x 0.038 ml (48 reactions) 8 x 0.038 ml (48 reactions)

1.3 Details of the supplier of the safety data sheet

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	: RE Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	SSC 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.
	DNA Ligase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	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.
	Wash Solution	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Capture 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.
	HaloPlex ION Primer 1	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	HaloPlex ION Primer 2	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	HaloPlex Barcoding Primer Cassettes 1-16	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).
	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

Section 2. Hazards identification

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).

Classification of the substance or mixture

DNA Ligase

H320 EYE IRRITATION - Category 2B

Wash Solution

H319 EYE IRRITATION - Category 2A

H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

Hybridization Solution

H319 EYE IRRITATION - Category 2A

H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

Enzyme Strip 1

H320 EYE IRRITATION - Category 2B

Enzyme Strip 2

H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity

BSA Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
DNA Ligase	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
Wash Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Capture Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
Hybridization Solution	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
Enzyme Strip 1	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
Enzyme Strip 2	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%

2.2 GHS label elements

Hazard pictograms

Wash Solution



Hybridization Solution



Signal word

:

Section 2. Hazards identification

	RE Buffer	No signal word.
	SSC Buffer	No signal word.
	BSA Solution	No signal word.
	DNA Ligase	Warning
	Ligation Solution	No signal word.
	Wash Solution	Danger
	Capture Solution	No signal word.
	HaloPlex ION Primer 1	No signal word.
	HaloPlex ION Primer 2	No signal word.
	HaloPlex Barcoding Primer Cassettes 1-16	No signal word.
	Hybridization Solution	Danger
	Enrichment Control DNA	No signal word.
	Enzyme Strip 1	Warning
	Enzyme Strip 2	Warning
Hazard statements	: RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	H320 - Causes eye irritation.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	H319 - Causes serious eye irritation. H360 - May damage the unborn child.
	Capture Solution	No known significant effects or critical hazards.
	HaloPlex ION Primer 1	No known significant effects or critical hazards.
	HaloPlex ION Primer 2	No known significant effects or critical hazards.
	HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
	Hybridization Solution	H319 - Causes serious eye irritation. H360 - May damage the unborn child.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Enzyme Strip 1	H320 - Causes eye irritation.
	Enzyme Strip 2	H320 - Causes eye irritation.
Precautionary statements		
Prevention	: RE Buffer	Not applicable.
	SSC Buffer	Not applicable.
	BSA Solution	Not applicable.
	DNA Ligase	P264 - Wash hands thoroughly after handling.
	Ligation Solution	Not applicable.
	Wash Solution	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P264 - Wash hands thoroughly after handling.
	Capture Solution	Not applicable.
	HaloPlex ION Primer 1	Not applicable.
	HaloPlex ION Primer 2	Not applicable.
	HaloPlex Barcoding Primer Cassettes 1-16	Not applicable.
	Hybridization Solution	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P264 - Wash hands thoroughly after handling.
	Enrichment Control DNA	Not applicable.
	Enzyme Strip 1	P264 - Wash hands thoroughly after handling.
	Enzyme Strip 2	P264 - Wash hands thoroughly after handling.

Section 2. Hazards identification

Response

<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase 	<ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
<ul style="list-style-type: none"> Ligation Solution Wash Solution 	<ul style="list-style-type: none"> Not applicable. 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.
<ul style="list-style-type: none"> Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution 	<ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. 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.
<ul style="list-style-type: none"> Enrichment Control DNA Enzyme Strip 1 	<ul style="list-style-type: none"> Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
<ul style="list-style-type: none"> Enzyme Strip 2 	<ul style="list-style-type: none"> 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.

Storage

<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 	<ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P405 - Store locked up. Not applicable. Not applicable. Not applicable. Not applicable. P405 - Store locked up. Not applicable. Not applicable.
---	---

Section 2. Hazards identification

Disposal	: Enzyme Strip 2 RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable. Not applicable. Not applicable. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Not applicable. Not applicable. Not applicable.
Supplemental label elements	: RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known.
2.3 Other hazards		
Hazards not otherwise classified	: RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	<input checked="" type="checkbox"/> E Buffer	Mixture
		SSC Buffer	Mixture
		BSA Solution	Mixture
		DNA Ligase	Mixture
		Ligation Solution	Mixture
		Wash Solution	Mixture
		Capture Solution	Mixture
		HaloPlex ION Primer 1	Mixture
		HaloPlex ION Primer 2	Mixture
		HaloPlex Barcoding Primer	Mixture
		Cassettes 1-16	
		Hybridization Solution	Mixture
		Enrichment Control DNA	Mixture
		Enzyme Strip 1	Mixture
		Enzyme Strip 2	Mixture

Ingredient name	%	CAS number
BSA Solution Glycerol	<10	56-81-5
DNA Ligase Glycerol	≥50 - ≤75	56-81-5
Wash Solution Formamide Sodium chloride	≥10 - ≤25 ≤10	75-12-7 7647-14-5
Capture Solution Sodium chloride	<10	7647-14-5
Hybridization Solution Formamide Sodium chloride	≥25 - ≤50 ≥10 - ≤25	75-12-7 7647-14-5
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.

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 : E 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.

SSC 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.

Section 4. First aid measures

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.
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.
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.
Wash 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.
Capture 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.
HaloPlex ION Primer 1	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
HaloPlex ION Primer 2	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
HaloPlex Barcoding Primer Cassettes 1-16	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.
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.
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.

Section 4. First aid measures

Inhalation	: RE Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	SSC 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.
	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.
	Ligation Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Wash Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Capture Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	HaloPlex ION Primer 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	HaloPlex ION Primer 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	HaloPlex Barcoding Primer Cassettes 1-16	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

Section 4. First aid measures

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.

Enrichment Control DNA

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

Enzyme Strip 1

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Enzyme Strip 2

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: RE Buffer

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

SSC 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.

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.

Ligation Solution

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Wash 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.

Capture Solution

Flush contaminated skin with plenty of water.

Section 4. First aid measures

HaloPlex ION Primer 1	Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water.
HaloPlex ION Primer 2	Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water.
HaloPlex Barcoding Primer Cassettes 1-16	Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water.
Hybridization Solution	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. Flush contaminated skin with plenty of water.
Enrichment Control DNA	Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Flush contaminated skin with plenty of water.
Enzyme Strip 1	Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Flush contaminated skin with plenty of water.
Enzyme Strip 2	Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Flush contaminated skin with plenty of water.
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.
SSC 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.
DNA Ligase	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless

Section 4. First aid measures

	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.
Ligation Solution	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Wash Solution	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Capture 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.
HaloPlex ION Primer 1	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
HaloPlex ION Primer 2	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
HaloPlex Barcoding Primer Cassettes 1-16	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.

Section 4. First aid measures

Hybridization Solution

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

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.

Enzyme Strip 1

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.

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.

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

[Potential acute health effects](#)

Section 4. First aid measures

Eye contact	:	<input checked="" type="checkbox"/> E Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	Causes eye irritation.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	Causes serious eye irritation.
		Capture Solution	No known significant effects or critical hazards.
		HaloPlex ION Primer 1	No known significant effects or critical hazards.
		HaloPlex ION Primer 2	No known significant effects or critical hazards.
		HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
		Hybridization Solution	Causes serious eye irritation.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Enzyme Strip 1	Causes eye irritation.
		Enzyme Strip 2	Causes eye irritation.
Inhalation	:	<input checked="" type="checkbox"/> E Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		HaloPlex ION Primer 1	No known significant effects or critical hazards.
		HaloPlex ION Primer 2	No known significant effects or critical hazards.
		HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	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.
Skin contact	:	<input checked="" type="checkbox"/> E Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		HaloPlex ION Primer 1	No known significant effects or critical hazards.
		HaloPlex ION Primer 2	No known significant effects or critical hazards.
		HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	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.
Ingestion	:	<input checked="" type="checkbox"/> E Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	No known significant effects or critical hazards.
		Capture Solution	No known significant effects or critical hazards.
		HaloPlex ION Primer 1	No known significant effects or critical hazards.
		HaloPlex ION Primer 2	No known significant effects or critical hazards.
		HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
		Hybridization Solution	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.

Section 4. First aid measures

	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
Over-exposure signs/symptoms		
Eye contact	: RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	Adverse symptoms may include the following: irritation watering redness
	Ligation Solution	No specific data.
	Wash Solution	Adverse symptoms may include the following: pain or irritation watering redness
	Capture Solution	No specific data.
	HaloPlex ION Primer 1	No specific data.
	HaloPlex ION Primer 2	No specific data.
	HaloPlex Barcoding Primer Cassettes 1-16	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: pain or irritation watering redness
	Enrichment Control DNA	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	: RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	No specific data.
	Ligation Solution	No specific data.
	Wash Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Capture Solution	No specific data.
	HaloPlex ION Primer 1	No specific data.
	HaloPlex ION Primer 2	No specific data.
	HaloPlex Barcoding Primer Cassettes 1-16	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.

Section 4. First aid measures

Skin contact	:	RE Buffer	No specific data.
		SSC Buffer	No specific data.
		BSA Solution	No specific data.
		DNA Ligase	No specific data.
		Ligation Solution	No specific data.
		Wash Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
		Capture Solution	No specific data.
		HaloPlex ION Primer 1	No specific data.
		HaloPlex ION Primer 2	No specific data.
		HaloPlex Barcoding Primer Cassettes 1-16	No specific data.
Ingestion	:	Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
		Enrichment Control DNA	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.
		RE Buffer	No specific data.
		SSC Buffer	No specific data.
		BSA Solution	No specific data.
		DNA Ligase	No specific data.
		Ligation Solution	No specific data.
		Wash Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	:	Capture Solution	No specific data.
		HaloPlex ION Primer 1	No specific data.
		HaloPlex ION Primer 2	No specific data.
		HaloPlex Barcoding Primer Cassettes 1-16	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
		Enrichment Control DNA	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	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.
		SSC 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.
		DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Ligation Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

	Wash Solution	specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Capture Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HaloPlex ION Primer 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HaloPlex ION Primer 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HaloPlex Barcoding Primer Cassettes 1-16	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.
	Enrichment Control DNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: RE Buffer	No specific treatment.
	SSC Buffer	No specific treatment.
	BSA Solution	No specific treatment.
	DNA Ligase	No specific treatment.
	Ligation Solution	No specific treatment.
	Wash Solution	No specific treatment.
	Capture Solution	No specific treatment.
	HaloPlex ION Primer 1	No specific treatment.
	HaloPlex ION Primer 2	No specific treatment.
	HaloPlex Barcoding Primer Cassettes 1-16	No specific treatment.
	Hybridization Solution	No specific treatment.
	Enrichment Control DNA	No specific treatment.
	Enzyme Strip 1	No specific treatment.
	Enzyme Strip 2	No specific treatment.
Protection of first-aiders	: RE Buffer	No action shall be taken involving any personal risk or without suitable training.
	SSC 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.
	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.
	Ligation Solution	No action shall be taken involving any personal risk or without suitable training.

Section 4. First aid measures

Wash 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.
Capture Solution	No action shall be taken involving any personal risk or without suitable training.
HaloPlex ION Primer 1	No action shall be taken involving any personal risk or without suitable training.
HaloPlex ION Primer 2	No action shall be taken involving any personal risk or without suitable training.
HaloPlex Barcoding Primer Cassettes 1-16	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.
Enrichment Control DNA	No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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.
	SSC Buffer	Use an extinguishing agent suitable for the surrounding fire.
	BSA Solution	Use an extinguishing agent suitable for the surrounding fire.
	DNA Ligase	Use an extinguishing agent suitable for the surrounding fire.
	Ligation Solution	Use an extinguishing agent suitable for the surrounding fire.
	Wash Solution	Use an extinguishing agent suitable for the surrounding fire.
	Capture Solution	Use an extinguishing agent suitable for the surrounding fire.
	HaloPlex ION Primer 1	Use an extinguishing agent suitable for the surrounding fire.
	HaloPlex ION Primer 2	Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

HaloPlex Barcoding Primer Cassettes 1-16	Hybridization Solution	Enrichment Control DNA	Enzyme Strip 1	Enzyme Strip 2	Use an extinguishing agent suitable for the surrounding fire.	Use an extinguishing agent suitable for the surrounding fire.	Use an extinguishing agent suitable for the surrounding fire.	Use an extinguishing agent suitable for the surrounding fire.	Use an extinguishing agent suitable for the surrounding fire.																		
Unsuitable extinguishing media	: RE Buffer	SSC Buffer	BSA Solution	DNA Ligase	Ligation Solution	Wash Solution	Capture Solution	HaloPlex ION Primer 1	HaloPlex ION Primer 2	HaloPlex Barcoding Primer Cassettes 1-16	Hybridization Solution	Enrichment Control DNA	Enzyme Strip 1	Enzyme Strip 2	None known.	None known.	None known.	None known.	None known.	None known.	None known.	None known.	None known.	None known.	None known.	None known.	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: RE Buffer	SSC Buffer	BSA Solution	DNA Ligase	Ligation Solution	Wash Solution	Capture Solution	HaloPlex ION Primer 1	HaloPlex ION Primer 2	HaloPlex Barcoding Primer Cassettes 1-16	Hybridization Solution	Enrichment Control DNA	Enzyme Strip 1	Enzyme Strip 2	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	In a fire or if heated, a pressure increase will occur and the container may burst.	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	:	RE Buffer	No specific data.
		SSC Buffer	No specific data.
		BSA Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
		DNA Ligase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
		Ligation Solution	No specific data.
		Wash Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
		Capture Solution	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
		HaloPlex ION Primer 1	No specific data.
		HaloPlex ION Primer 2	No specific data.
		HaloPlex Barcoding Primer Cassettes 1-16	No specific data.
Hybridization Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides		
Enrichment Control DNA	No specific data.		
Enzyme Strip 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide		
Enzyme Strip 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide		

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.
	SSC 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.
	DNA Ligase	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No

Section 5. Fire-fighting measures

action shall be taken involving any personal risk or without suitable training.

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.

Wash 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.

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.

HaloPlex ION Primer 1

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

HaloPlex ION Primer 2

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

HaloPlex Barcoding Primer Cassettes 1-16

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.

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.

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.

Special protective equipment for fire-fighters

:  E Buffer

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SSC 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.

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.

Ligation Solution

Fire-fighters should wear appropriate protective

Section 5. Fire-fighting measures

Wash Solution	equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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.
HaloPlex ION Primer 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HaloPlex ION Primer 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HaloPlex Barcoding Primer Cassettes 1-16	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Hybridization Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
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.
Enzyme Strip 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Enzyme Strip 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

:  E 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. 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. 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

SSC Buffer

BSA Solution

Section 6. Accidental release measures

DNA Ligase	touch or walk through spilled material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
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.
Wash 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.
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. Put on appropriate personal protective equipment.
HaloPlex ION Primer 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
HaloPlex ION Primer 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
HaloPlex Barcoding Primer Cassettes 1-16	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.

Section 6. Accidental release measures

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

Section 6. Accidental release measures

HaloPlex Barcoding Primer Cassettes 1-16	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".
Hybridization Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
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".
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".

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).
SSC 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).
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).
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).
Wash 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).
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).
HaloPlex ION Primer 1	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 6. Accidental release measures

HaloPlex ION Primer 2	Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). 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 Barcoding Primer Cassettes 1-16	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).
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).
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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up :  Buffer

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

Section 6. Accidental release measures

Ligation Solution	disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Wash 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.
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.
HaloPlex ION Primer 1	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HaloPlex ION Primer 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
HaloPlex Barcoding Primer Cassettes 1-16	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.
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.
Enzyme Strip 1	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Enzyme Strip 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal contractor.


Section 6. Accidental release measures

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

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

:  E Buffer	Put on appropriate personal protective equipment (see Section 8).
SSC Buffer	Put on appropriate personal protective equipment (see Section 8).
BSA Solution	Put on appropriate personal protective equipment (see Section 8).
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.
Ligation Solution	Put on appropriate personal protective equipment (see Section 8).
Wash 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.
Capture Solution	Put on appropriate personal protective equipment (see Section 8).
HaloPlex ION Primer 1	Put on appropriate personal protective equipment (see Section 8).
HaloPlex ION Primer 2	Put on appropriate personal protective equipment (see Section 8).
HaloPlex Barcoding Primer Cassettes 1-16	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.
Enrichment Control DNA	Put on appropriate personal protective equipment

Section 7. Handling and storage

(see Section 8).

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 1

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.

Advice on general occupational hygiene

: RE Buffer

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

SSC Buffer

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

BSA Solution

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

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.

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.

Wash 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.

Section 7. Handling and storage

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.
HaloPlex ION Primer 1	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HaloPlex ION Primer 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HaloPlex Barcoding Primer Cassettes 1-16	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.
Enrichment Control DNA	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Enzyme Strip 1	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Enzyme Strip 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

: RE Buffer

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

SSC Buffer

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

BSA Solution

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

DNA Ligase

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

Ligation Solution

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

Wash Solution

Store in accordance with local regulations. Store in original container protected from direct sunlight in a

Section 7. Handling and storage

	dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Capture Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
HaloPlex ION Primer 1	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
HaloPlex ION Primer 2	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
HaloPlex Barcoding Primer Cassettes 1-16	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Hybridization Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly

Section 7. Handling and storage

Enrichment Control DNA	closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Enzyme Strip 1	Store between the following temperatures: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Enzyme Strip 2	Storage temperature: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA 	<ul style="list-style-type: none"> Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
---	--

Section 7. Handling and storage

Industrial sector specific solutions	Enzyme Strip 1	Industrial applications, Professional applications.
	Enzyme Strip 2	Industrial applications, Professional applications.
	RE Buffer	Not applicable.
	SSC Buffer	Not applicable.
	BSA Solution	Not applicable.
	DNA Ligase	Not applicable.
	Ligation Solution	Not applicable.
	Wash Solution	Not applicable.
	Capture Solution	Not applicable.
	HaloPlex ION Primer 1	Not applicable.
	HaloPlex ION Primer 2	Not applicable.
	HaloPlex Barcoding Primer	Not applicable.
	Cassettes 1-16	
	Hybridization Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.	

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
BSA Solution Glycerol	<p>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</p> <p>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
DNA Ligase Glycerol	<p>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</p> <p>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
Wash Solution Formamide	<p>ACGIH TLV (United States, 3/2016). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 18 mg/m³ 8 hours.</p> <p>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.</p> <p>NIOSH REL (United States, 10/2016). Absorbed through skin. TWA: 10 ppm 10 hours. TWA: 15 mg/m³ 10 hours.</p>

Section 8. Exposure controls/personal protection

Sodium chloride	None.
Capture Solution Sodium chloride	None.
Hybridization Solution Formamide	<p>ACGIH TLV (United States, 3/2016). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 18 mg/m³ 8 hours.</p> <p>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.</p> <p>NIOSH REL (United States, 10/2016). Absorbed through skin. TWA: 10 ppm 10 hours. TWA: 15 mg/m³ 10 hours.</p>
Sodium chloride	None.
Enzyme Strip 1 Glycerol	<p>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</p> <p>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
Enzyme Strip 2 Glycerol	<p>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</p> <p>OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>

8.2 Exposure controls

Appropriate engineering controls

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

Environmental exposure controls

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

Individual protection measures

Hygiene measures

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

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	RE Buffer	Liquid.
	SSC Buffer	Liquid.
	BSA Solution	Liquid. [Clear.]
	DNA Ligase	Liquid.
	Ligation Solution	Liquid.
	Wash Solution	Liquid.
	Capture Solution	Liquid.
	HaloPlex ION Primer 1	Liquid.
	HaloPlex ION Primer 2	Liquid.
	HaloPlex Barcoding Primer	Liquid.
	Cassettes 1-16	
	Hybridization Solution	Liquid.
	Enrichment Control DNA	Liquid.
	Enzyme Strip 1	Liquid.
	Enzyme Strip 2	Liquid.
	Color	RE Buffer
SSC Buffer		Not available.
BSA Solution		Colorless.
DNA Ligase		Not available.
Ligation Solution		Not available.
Wash Solution		Not available.
Capture Solution		Not available.
HaloPlex ION Primer 1		Not available.
HaloPlex ION Primer 2		Not available.
HaloPlex Barcoding Primer		Not available.
Cassettes 1-16		
Hybridization Solution		Not available.
Enrichment Control DNA		Not available.
Enzyme Strip 1		Not available.
Enzyme Strip 2		Not available.

Section 9. Physical and chemical properties

Odor	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Odorless.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		HaloPlex ION Primer 1	Not available.
		HaloPlex ION Primer 2	Not available.
		HaloPlex Barcoding Primer	Not available.
		Cassettes 1-16	
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
Odor threshold	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Not available.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		HaloPlex ION Primer 1	Not available.
		HaloPlex ION Primer 2	Not available.
		HaloPlex Barcoding Primer	Not available.
		Cassettes 1-16	
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
pH	:	RE Buffer	7.9
		SSC Buffer	Not available.
		BSA Solution	Not available.
		DNA Ligase	7.4
		Ligation Solution	Not available.
		Wash Solution	7.5
		Capture Solution	Not available.
		HaloPlex ION Primer 1	Not available.
		HaloPlex ION Primer 2	Not available.
		HaloPlex Barcoding Primer	Not available.
		Cassettes 1-16	
		Hybridization Solution	7.5
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	7.4
		Enzyme Strip 2	7.4
Melting point	:	RE Buffer	0°C (32°F)
		SSC Buffer	0°C (32°F)
		BSA Solution	20°C (68°F)
		DNA Ligase	Not available.
		Ligation Solution	0°C (32°F)
		Wash Solution	Not available.
		Capture Solution	Not available.
		HaloPlex ION Primer 1	0°C (32°F)
		HaloPlex ION Primer 2	0°C (32°F)
		HaloPlex Barcoding Primer	0°C (32°F)
		Cassettes 1-16	
		Hybridization Solution	Not available.

Section 9. Physical and chemical properties

	Enrichment Control DNA	0°C (32°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
Boiling point	: RE Buffer	100°C (212°F)
	SSC Buffer	100°C (212°F)
	BSA Solution	182°C (359.6°F)
	DNA Ligase	Not available.
	Ligation Solution	100°C (212°F)
	Wash Solution	Not available.
	Capture Solution	Not available.
	HaloPlex ION Primer 1	100°C (212°F)
	HaloPlex ION Primer 2	100°C (212°F)
	HaloPlex Barcoding Primer	100°C (212°F)
	Cassettes 1-16	
	Hybridization Solution	Not available.
	Enrichment Control DNA	100°C (212°F)
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
Flash point	: RE Buffer	Not available.
	SSC Buffer	Not available.
	BSA Solution	Closed cup: 160°C (320°F)
	DNA Ligase	Not available.
	Ligation Solution	Not available.
	Wash Solution	Not available.
	Capture Solution	Not available.
	HaloPlex ION Primer 1	Not available.
	HaloPlex ION Primer 2	Not available.
	HaloPlex Barcoding Primer	Not available.
	Cassettes 1-16	
	Hybridization Solution	Not available.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
Evaporation rate	: RE Buffer	Not available.
	SSC Buffer	Not available.
	BSA Solution	Not available.
	DNA Ligase	Not available.
	Ligation Solution	Not available.
	Wash Solution	Not available.
	Capture Solution	Not available.
	HaloPlex ION Primer 1	Not available.
	HaloPlex ION Primer 2	Not available.
	HaloPlex Barcoding Primer	Not available.
	Cassettes 1-16	
	Hybridization Solution	Not available.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.
Flammability (solid, gas)	: RE Buffer	Not applicable.
	SSC Buffer	Not applicable.
	BSA Solution	Not applicable.
	DNA Ligase	Not applicable.
	Ligation Solution	Not applicable.
	Wash Solution	Not applicable.
	Capture Solution	Not applicable.
	HaloPlex ION Primer 1	Not applicable.
	HaloPlex ION Primer 2	Not applicable.

Section 9. Physical and chemical properties

	HaloPlex Barcoding Primer Cassettes 1-16	Not applicable.
	Hybridization Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	Enzyme Strip 1	Not applicable.
	Enzyme Strip 2	Not applicable.
Lower and upper explosive (flammable) limits	: RE Buffer	Not available.
	SSC Buffer	Not available.
	BSA Solution	Not available.
	DNA Ligase	Not available.
	Ligation Solution	Not available.
	Wash Solution	Not available.
	Capture Solution	Not available.
	HaloPlex ION Primer 1	Not available.
	HaloPlex ION Primer 2	Not available.
	HaloPlex Barcoding Primer Cassettes 1-16	Not available.
	Hybridization Solution	Not available.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Lower: 0.9%
	Enzyme Strip 2	Not available.
Vapor pressure	: RE Buffer	Not available.
	SSC Buffer	Not available.
	BSA Solution	<0.13 kPa (<1 mm Hg) [room temperature]
	DNA Ligase	Not available.
	Ligation Solution	Not available.
	Wash Solution	Not available.
	Capture Solution	Not available.
	HaloPlex ION Primer 1	Not available.
	HaloPlex ION Primer 2	Not available.
	HaloPlex Barcoding Primer Cassettes 1-16	Not available.
	Hybridization Solution	Not available.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	<0.13 kPa (<1 mm Hg) [room temperature]
Vapor density	: RE Buffer	Not available.
	SSC Buffer	Not available.
	BSA Solution	3.1 [Air = 1]
	DNA Ligase	Not available.
	Ligation Solution	Not available.
	Wash Solution	Not available.
	Capture Solution	Not available.
	HaloPlex ION Primer 1	Not available.
	HaloPlex ION Primer 2	Not available.
	HaloPlex Barcoding Primer Cassettes 1-16	Not available.
	Hybridization Solution	Not available.
	Enrichment Control DNA	Not available.
	Enzyme Strip 1	Not available.
	Enzyme Strip 2	Not available.

Section 9. Physical and chemical properties

Relative density	:	 E Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	1.262
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		HaloPlex ION Primer 1	Not available.
		HaloPlex ION Primer 2	Not available.
		HaloPlex Barcoding Primer Cassettes 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
		Solubility	:
SSC Buffer	Easily soluble in the following materials: cold water and hot water.		
BSA Solution	Soluble in the following materials: cold water and hot water.		
DNA Ligase	Easily soluble in the following materials: cold water and hot water.		
Ligation Solution	Easily soluble in the following materials: cold water and hot water.		
Wash Solution	Soluble in the following materials: cold water and hot water.		
Capture Solution	Easily soluble in the following materials: cold water and hot water.		
HaloPlex ION Primer 1	Easily soluble in the following materials: cold water and hot water.		
HaloPlex ION Primer 2	Easily soluble in the following materials: cold water and hot water.		
HaloPlex Barcoding Primer Cassettes 1-16	Easily soluble in the following materials: cold water and hot water.		
Hybridization 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.		
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.		
Partition coefficient: n-octanol/water	:		
		SSC Buffer	Not available.
		BSA Solution	Not available.
		DNA Ligase	Not available.
		Ligation Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		HaloPlex ION Primer 1	Not available.
		HaloPlex ION Primer 2	Not available.
		HaloPlex Barcoding Primer Cassettes 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature	<input checked="" type="checkbox"/> RE Buffer	Not available.	
	SSC Buffer	Not available.	
	BSA Solution	370°C (698°F)	
	DNA Ligase	Not available.	
	Ligation Solution	Not available.	
	Wash Solution	Not available.	
	Capture Solution	Not available.	
	HaloPlex ION Primer 1	Not available.	
	HaloPlex ION Primer 2	Not available.	
	HaloPlex Barcoding Primer Cassettes 1-16	Not available.	
	Hybridization Solution	Not available.	
	Enrichment Control DNA	Not available.	
	Enzyme Strip 1	Not available.	
	Enzyme Strip 2	Not available.	
	Decomposition temperature	<input checked="" type="checkbox"/> RE Buffer	Not available.
		SSC Buffer	Not available.
BSA Solution		Not available.	
DNA Ligase		Not available.	
Ligation Solution		Not available.	
Wash Solution		Not available.	
Capture Solution		Not available.	
HaloPlex ION Primer 1		Not available.	
HaloPlex ION Primer 2		Not available.	
HaloPlex Barcoding Primer Cassettes 1-16		Not available.	
Hybridization Solution		Not available.	
Enrichment Control DNA		Not available.	
Enzyme Strip 1		Not available.	
Enzyme Strip 2		Not available.	
Viscosity		<input checked="" type="checkbox"/> RE Buffer	Not available.
		SSC Buffer	Not available.
	BSA Solution	Not available.	
	DNA Ligase	Not available.	
	Ligation Solution	Not available.	
	Wash Solution	Not available.	
	Capture Solution	Not available.	
	HaloPlex ION Primer 1	Not available.	
	HaloPlex ION Primer 2	Not available.	
	HaloPlex Barcoding Primer Cassettes 1-16	Not available.	
	Hybridization Solution	Not available.	
	Enrichment Control DNA	Not available.	
	Enzyme Strip 1	Not available.	
	Enzyme Strip 2	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.
	SSC 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.
	DNA Ligase	No specific test data related to reactivity available for this product or its ingredients.
	Ligation Solution	No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

Wash Solution	No specific test data related to reactivity available for this product or its ingredients.
Capture Solution	No specific test data related to reactivity available for this product or its ingredients.
HaloPlex ION Primer 1	No specific test data related to reactivity available for this product or its ingredients.
HaloPlex ION Primer 2	No specific test data related to reactivity available for this product or its ingredients.
HaloPlex Barcoding Primer Cassettes 1-16	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.
Enrichment Control DNA	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.

10.2 Chemical stability

<ul style="list-style-type: none"> ☑ RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2 	<ul style="list-style-type: none"> The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
---	--

10.3 Possibility of hazardous reactions

<ul style="list-style-type: none"> ☑ RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA 	<ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
---	--

Section 10. Stability and reactivity

Enzyme Strip 1	hazardous reactions will not occur. 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.

10.4 Conditions to avoid	:	<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2 	<ul style="list-style-type: none"> No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
---------------------------------	---	---	---

10.5 Incompatible materials	:	<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2 	<ul style="list-style-type: none"> May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
------------------------------------	---	---	--

10.6 Hazardous decomposition products	:	<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution 	<ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use,
--	---	---	---

Section 10. Stability and reactivity

DNA Ligase	hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Ligation Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Wash Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Capture Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HaloPlex ION Primer 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HaloPlex ION Primer 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HaloPlex Barcoding Primer Cassettes 1-16	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hybridization Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enrichment Control DNA	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enzyme Strip 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enzyme Strip 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

[11.1 Information on toxicological effects](#)

[Acute toxicity](#)

Product/ingredient name	Result	Species	Dose	Exposure
BSA Solution Glycerol	LD50 Oral	Rat	12600 mg/kg	-
DNA Ligase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Wash Solution Formamide	LC50 Inhalation Dusts and mists LD50 Dermal	Rat Rabbit	>21 mg/l 17 g/kg	4 hours -
Sodium chloride	LD50 Oral LD50 Oral	Rat Rat	4000 mg/kg 3000 mg/kg	- -
Capture Solution Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Hybridization Solution Formamide	LC50 Inhalation Dusts and mists	Rat	>21 mg/l	4 hours

Section 11. Toxicological information

Sodium chloride	LD50 Dermal LD50 Oral LD50 Oral	Rabbit Rat Rat	17 g/kg 4000 mg/kg 3000 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	-
DNA Ligase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Wash Solution Formamide	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams
Capture Solution Sodium chloride	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	10 milligrams 24 hours 500 milligrams	- -
	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	24 hours 100 milligrams 10 milligrams 24 hours 500 milligrams	- - -
Hybridization Solution Formamide	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams
Enzyme Strip 1 Glycerol	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	10 milligrams 24 hours 500 milligrams	- -
	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	24 hours 500 milligrams 24 hours 500 milligrams	- -
Enzyme Strip 2 Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Section 11. Toxicological information

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

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase 	<ul style="list-style-type: none"> Not available. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
<ul style="list-style-type: none"> Ligation Solution Wash Solution 	<ul style="list-style-type: none"> Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
<ul style="list-style-type: none"> Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution 	<ul style="list-style-type: none"> Not available. Not available. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
<ul style="list-style-type: none"> Enrichment Control DNA Enzyme Strip 1 	<ul style="list-style-type: none"> Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
<ul style="list-style-type: none"> Enzyme Strip 2 	<ul style="list-style-type: none"> Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact




<ul style="list-style-type: none"> RE Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer 	<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 eye irritation. No known significant effects or critical hazards. 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.
--	---

Section 11. Toxicological information

	Cassettes 1-16		
	Hybridization Solution		Causes serious eye irritation.
	Enrichment Control DNA		No known significant effects or critical hazards.
	Enzyme Strip 1		Causes eye irritation.
	Enzyme Strip 2		Causes eye irritation.
Inhalation	: RE Buffer		No known significant effects or critical hazards.
	SSC Buffer		No known significant effects or critical hazards.
	BSA Solution		No known significant effects or critical hazards.
	DNA Ligase		No known significant effects or critical hazards.
	Ligation Solution		No known significant effects or critical hazards.
	Wash Solution		No known significant effects or critical hazards.
	Capture Solution		No known significant effects or critical hazards.
	HaloPlex ION Primer 1		No known significant effects or critical hazards.
	HaloPlex ION Primer 2		No known significant effects or critical hazards.
	HaloPlex Barcoding Primer		No known significant effects or critical hazards.
	Cassettes 1-16		
	Hybridization Solution		No known significant effects or critical hazards.
	Enrichment Control DNA		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.
Skin contact	: RE Buffer		No known significant effects or critical hazards.
	SSC Buffer		No known significant effects or critical hazards.
	BSA Solution		No known significant effects or critical hazards.
	DNA Ligase		No known significant effects or critical hazards.
	Ligation Solution		No known significant effects or critical hazards.
	Wash Solution		No known significant effects or critical hazards.
	Capture Solution		No known significant effects or critical hazards.
	HaloPlex ION Primer 1		No known significant effects or critical hazards.
	HaloPlex ION Primer 2		No known significant effects or critical hazards.
	HaloPlex Barcoding Primer		No known significant effects or critical hazards.
	Cassettes 1-16		
	Hybridization Solution		No known significant effects or critical hazards.
	Enrichment Control DNA		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.
Ingestion	: RE Buffer		No known significant effects or critical hazards.
	SSC Buffer		No known significant effects or critical hazards.
	BSA Solution		No known significant effects or critical hazards.
	DNA Ligase		No known significant effects or critical hazards.
	Ligation Solution		No known significant effects or critical hazards.
	Wash Solution		No known significant effects or critical hazards.
	Capture Solution		No known significant effects or critical hazards.
	HaloPlex ION Primer 1		No known significant effects or critical hazards.
	HaloPlex ION Primer 2		No known significant effects or critical hazards.
	HaloPlex Barcoding Primer		No known significant effects or critical hazards.
	Cassettes 1-16		
	Hybridization Solution		No known significant effects or critical hazards.
	Enrichment Control DNA		No known significant effects or critical hazards.
	Enzyme Strip 1		No known significant effects or critical hazards.
	Enzyme Strip 2		No known significant effects or critical hazards.

[Symptoms related to the physical, chemical and toxicological characteristics](#)

Section 11. Toxicological information

Eye contact	:  E Buffer SSC Buffer BSA Solution DNA Ligase	No specific data.
		No specific data.
		No specific data.
		Adverse symptoms may include the following: irritation watering redness
	Ligation Solution Wash Solution	No specific data.
		Adverse symptoms may include the following: pain or irritation watering redness
	Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution	No specific data.
		No specific data.
		No specific data.
		No specific data.
Enrichment Control DNA Enzyme Strip 1	Adverse symptoms may include the following: pain or irritation watering redness	
	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	:  E Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution	No specific data.
		No specific data.
		No specific data.
		No specific data.
	Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution	No specific data.
		No specific data.
		No specific data.
		No specific data.
	Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
		No specific data. No specific data. No specific data.
Skin contact	:  E Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution	No specific data.
		No specific data.
		No specific data.
		No specific data.
	No specific data.	
	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths	

Section 11. Toxicological information

	Capture Solution	skeletal malformations
	HaloPlex ION Primer 1	No specific data.
	HaloPlex ION Primer 2	No specific data.
	HaloPlex Barcoding Primer	No specific data.
	Cassettes 1-16	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
Ingestion	: RE Buffer	No specific data.
	SSC Buffer	No specific data.
	BSA Solution	No specific data.
	DNA Ligase	No specific data.
	Ligation Solution	No specific data.
	Wash Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Capture Solution	No specific data.
	HaloPlex ION Primer 1	No specific data.
	HaloPlex ION Primer 2	No specific data.
	HaloPlex Barcoding Primer	No specific data.
	Cassettes 1-16	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Enrichment Control DNA	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	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

General	: RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	No known significant effects or critical hazards.
	Capture Solution	No known significant effects or critical hazards.
	HaloPlex ION Primer 1	No known significant effects or critical hazards.
	HaloPlex ION Primer 2	No known significant effects or critical hazards.
	HaloPlex Barcoding Primer	No known significant effects or critical hazards.
	Cassettes 1-16	No known significant effects or critical hazards.

Section 11. Toxicological information

	Hybridization Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	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.
Carcinogenicity	: RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	No known significant effects or critical hazards.
	Capture Solution	No known significant effects or critical hazards.
	HaloPlex ION Primer 1	No known significant effects or critical hazards.
	HaloPlex ION Primer 2	No known significant effects or critical hazards.
	HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	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.
Mutagenicity	: RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	No known significant effects or critical hazards.
	Capture Solution	No known significant effects or critical hazards.
	HaloPlex ION Primer 1	No known significant effects or critical hazards.
	HaloPlex ION Primer 2	No known significant effects or critical hazards.
	HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
	Hybridization Solution	No known significant effects or critical hazards.
	Enrichment Control DNA	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.
Teratogenicity	: RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	May damage the unborn child.
	Capture Solution	No known significant effects or critical hazards.
	HaloPlex ION Primer 1	No known significant effects or critical hazards.
	HaloPlex ION Primer 2	No known significant effects or critical hazards.
	HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
	Hybridization Solution	May damage the unborn child.
	Enrichment Control DNA	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.
Developmental effects	: RE Buffer	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	Wash Solution	No known significant effects or critical hazards.
	Capture Solution	No known significant effects or critical hazards.
	HaloPlex ION Primer 1	No known significant effects or critical hazards.
	HaloPlex ION Primer 2	No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects	:	<input checked="" type="checkbox"/> HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
		<input type="checkbox"/> Hybridization Solution	No known significant effects or critical hazards.
		<input type="checkbox"/> Enrichment Control DNA	No known significant effects or critical hazards.
		<input type="checkbox"/> Enzyme Strip 1	No known significant effects or critical hazards.
		<input type="checkbox"/> Enzyme Strip 2	No known significant effects or critical hazards.
		<input type="checkbox"/> RE Buffer	No known significant effects or critical hazards.
		<input type="checkbox"/> SSC Buffer	No known significant effects or critical hazards.
		<input type="checkbox"/> BSA Solution	No known significant effects or critical hazards.
		<input type="checkbox"/> DNA Ligase	No known significant effects or critical hazards.
		<input type="checkbox"/> Ligation Solution	No known significant effects or critical hazards.
		<input type="checkbox"/> Wash Solution	No known significant effects or critical hazards.
		<input type="checkbox"/> Capture Solution	No known significant effects or critical hazards.
		<input type="checkbox"/> HaloPlex ION Primer 1	No known significant effects or critical hazards.
		<input type="checkbox"/> HaloPlex ION Primer 2	No known significant effects or critical hazards.
		<input type="checkbox"/> HaloPlex Barcoding Primer Cassettes 1-16	No known significant effects or critical hazards.
		<input type="checkbox"/> Hybridization Solution	No known significant effects or critical hazards.
<input type="checkbox"/> Enrichment Control DNA	No known significant effects or critical hazards.		
<input type="checkbox"/> Enzyme Strip 1	No known significant effects or critical hazards.		
<input type="checkbox"/> Enzyme Strip 2	No known significant effects or critical hazards.		

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Wash Solution Oral	14453.4 mg/kg
Capture Solution Oral	51832.8 mg/kg
Hybridization Solution Oral	8119.1 mg/kg

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> BSA Solution Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<input type="checkbox"/> DNA Ligase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
<input type="checkbox"/> Wash Solution Sodium chloride	Acute EC50 4.74 g/L Fresh water	Algae - Chlamydomonas reinhardtii	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 402600 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling,	3 weeks

Section 12. Ecological information

Capture Solution Sodium chloride	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
	Acute EC50 4.74 g/L Fresh water Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks
	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
Hybridization Solution Sodium chloride	Acute EC50 4.74 g/L Fresh water Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks
	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 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	Test	Result	Dose	Inoculum
BSA Solution Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
DNA Ligase Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Enzyme Strip 1 Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Section 12. Ecological information

	Test			
Enzyme Strip 2 Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
BSA Solution Glycerol	-1.76	-	low
DNA Ligase Glycerol	-1.76	-	low
Wash Solution Formamide	-0.82	-	low
Hybridization Solution Formamide	-0.82	-	low
Enzyme Strip 1 Glycerol	-1.76	-	low
Enzyme Strip 2 Glycerol	-1.76	-	low

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.

Section 13. Disposal considerations

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

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

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

Section 14. Transport information

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

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

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

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) PAIR:** Formamide; Polyoxyethylene octyl phenyl ether
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Section 15. Regulatory information

Classification	: <input checked="" type="checkbox"/> E Buffer SSC Buffer BSA Solution DNA Ligase Ligation Solution Wash Solution Capture Solution HaloPlex ION Primer 1 HaloPlex ION Primer 2 HaloPlex Barcoding Primer Cassettes 1-16 Hybridization Solution Enrichment Control DNA Enzyme Strip 1 Enzyme Strip 2	Not applicable. Not applicable. Not applicable. Immediate (acute) health hazard Not applicable. Immediate (acute) health hazard Delayed (chronic) health hazard Not applicable. Not applicable. Not applicable. Not applicable. Immediate (acute) health hazard Delayed (chronic) health hazard Not applicable. Immediate (acute) health hazard Immediate (acute) health hazard
-----------------------	---	--

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
BSA Solution Glycerol	<10	No.	No.	No.	Yes.	No.
DNA Ligase Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
Wash Solution Formamide	≥10 - ≤25	No.	No.	No.	Yes.	Yes.
Sodium chloride	≤10	No.	No.	No.	Yes.	No.
Capture Solution Sodium chloride	<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.
Enzyme Strip 1 Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
Enzyme Strip 2 Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.

State regulations

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Section 15. Regulatory information

Not listed.

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

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

Section 16. Other information

[History](#)

Date of issue	: 10/25/2017
Date of previous issue	: 05/27/2015.
Version	: 2

Indicates information that has changed from previously issued version.

[Notice to reader](#)

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