Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

Custom HaloPlex Target Enrichment Kits - ION - 48 Reactions

Section 1. Identification

Product name : Custom HaloPlex Target Enrichment Kits - ION - 48 Reactions

Part No. (Chemical Kit) : 931113

Part No. :

RE Buffer	5190-5956
SSC Buffer	5190-5960
BSA Solution	5190-5963
DNA Ligase	5190-5955
Ligation Solution	5190-5952
Wash Solution	5190-5953
Capture Solution	5190-5954
HaloPlex ION Primer 1	5190-6196
HaloPlex ION Primer 2	5190-6197
HaloPlex Barcoding Primer Cassette 1-16	5190-6198
Hybridization Solution	5190-5951
Enrichment Control DNA	5190-5957
HaloPlex Magnetic Beads	5190-5967
HaloPlex Probe	5190-7254
Enzyme Strip 1	**5190-5961**
Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
Enzyme Strip 1 - well F	Not available.
Enzyme Strip 1	**5190-5962**
Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
Enzyme Strip 2 - well G	Not available.

Validation date : 07/25/2013.

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

Material uses : Analytical reagent.

RE Buffer	2.4 ml
SSC Buffer	8.15 ml
BSA Solution	0.058 ml
DNA Ligase	0.17 ml
Ligation Solution	3.25 ml
Wash Solution	7 ml
Capture Solution	2.4 ml
HaloPlex ION Primer 1	0.068 ml
HaloPlex ION Primer 2	0.068 ml
HaloPlex Barcoding Primer Cassette 1-16	0.72 ml (0.015 ml / well)
Hybridization Solution	3.5 ml
Enrichment Control DNA	0.24 ml
HaloPlex Magnetic Beads	2.3 ml
HaloPlex Probe	1.35 ml
Enzyme Strip 1 - well A, B, C, D, E, G, H	0.038 ml / well
Enzyme Strip 1 - well F	0.038 ml / well
Enzyme Strip 2 - well A, B, C, D, E, F, H	0.038 ml / well
Enzyme Strip 2 - well G	0.038 ml / well

Section 1. Identification

Supplier/Manufacturer : Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720
800-227-9770

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

Section 2. Hazards identification

OSHA/HCS status :

RE Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS 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 MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
BSA Solution	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DNA Ligase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Ligation Solution	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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 MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS 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 MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS 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 MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Section 2. Hazards identification

	HaloPlex Barcoding Primer Cassette 1-16	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS 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 MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
	HaloPlex Magnetic Beads	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
	HaloPlex Probe	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Enzyme Strip 1 - well F	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Enzyme Strip 2 - well A, B, C, D, E, F, H	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Enzyme Strip 2 - well G	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture :	RE Buffer	Not classified.
	SSC Buffer	Not classified.
	BSA Solution	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
	DNA Ligase	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
	Ligation Solution	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
	Wash Solution	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION [Unborn child] -

Section 2. Hazards identification

		Category 1B
	Capture Solution	Not classified.
	HaloPlex ION Primer 1	Not classified.
	HaloPlex ION Primer 2	Not classified.
	HaloPlex Barcoding Primer Cassette 1-16	Not classified.
	Hybridization Solution	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION [Unborn child] - Category 1B
	Enrichment Control DNA	Not classified.
	HaloPlex Magnetic Beads	Not classified.
	HaloPlex Probe	Not classified.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
	Enzyme Strip 1 - well F	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
	Enzyme Strip 2 - well A, B, C, D, E, F, H	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
	Enzyme Strip 2 - well G	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): INHALATION [kidneys] - Category 2
Ingredients of unknown toxicity :	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 Cassette 1-16	Not applicable.
	Hybridization Solution	Not applicable.
	Enrichment Control DNA	Not applicable.
	HaloPlex Magnetic Beads	Not applicable.
	HaloPlex Probe	Not applicable.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	Not applicable.
	Enzyme Strip 1 - well F	Not applicable.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	Not applicable.
	Enzyme Strip 2 - well G	Not applicable.

GHS label elements

Section 2. Hazards identification

Hazard pictograms :

	Signal word	**Hazard statements**
RE Buffer	No signal word.	No known significant effects or critical hazards.
SSC Buffer	No signal word.	No known significant effects or critical hazards.
BSA Solution	Warning	May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)
DNA Ligase	Warning	Causes eye irritation. May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)
Ligation Solution	Warning	May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)
Wash Solution	Danger	Causes serious eye irritation. May damage the unborn child.
Capture Solution	No signal word.	No known significant effects or critical hazards.
HaloPlex ION Primer 1	No signal word.	No known significant effects or critical hazards.
HaloPlex ION Primer 2	No signal word.	No known significant effects or critical hazards.
HaloPlex Barcoding Primer Cassette 1-16	No signal word.	No known significant effects or critical hazards.
Hybridization Solution	Danger	Causes serious eye irritation. May damage the unborn child.
Enrichment Control DNA	No signal word.	No known significant effects or critical hazards.
HaloPlex Magnetic Beads	No signal word.	No known significant effects or critical hazards.
HaloPlex Probe	No signal word.	No known significant effects or critical hazards.
Enzyme Strip 1 - well A, B, C, D, E, G, H	Warning	Causes eye irritation. May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)
Enzyme Strip 1 - well F	Warning	Causes eye irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)
Enzyme Strip 2 - well A, B, C, D, E, F, H	Warning	Causes eye irritation. May cause damage to organs through prolonged or repeated exposure if inhaled. (kidneys)
Enzyme Strip 2 - well G	Warning	Causes eye irritation. May cause damage to organs through prolonged or

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repeated exposure if inhaled. (kidneys)

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.
P280 - Wear protective gloves. Wear eye or face protection.
P260 - Do not breathe vapor.
P264 - Wash hands thoroughly after handling.

Response : P314 - Get medical attention if you feel unwell.
P308 + P313 - IF exposed or concerned: Get medical attention.
P302 + P352 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
P332 + P313 - If skin irritation occurs: 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.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :

RE Buffer	None known.
SSC Buffer	None known.
BSA Solution	None known.
DNA Ligase	None known.
Ligation Solution	None known.
Wash Solution	None known.
Capture Solution	None known.
HaloPlex ION Primer 1	None known.
HaloPlex ION Primer 2	None known.
HaloPlex Barcoding Primer Cassette 1-16	None known.
Hybridization Solution	None known.
Enrichment Control DNA	None known.
HaloPlex Magnetic Beads	None known.
HaloPlex Probe	None known.
Enzyme Strip 1 - well A, B, C, D, E, G, H	None known.
Enzyme Strip 1 - well F	None known.
Enzyme Strip 2 - well A, B, C, D, E, F, H	None known.
Enzyme Strip 2 - well G	None known.

Hazards not otherwise classified :

RE Buffer	None known.
SSC Buffer	None known.
BSA Solution	None known.
DNA Ligase	None known.
Ligation Solution	None known.
Wash Solution	None known.
Capture Solution	None known.
HaloPlex ION Primer 1	None known.
HaloPlex ION Primer 2	None known.
HaloPlex Barcoding Primer Cassette 1-16	None known.
Hybridization Solution	None known.
Enrichment Control DNA	None known.
HaloPlex Magnetic Beads	None known.
HaloPlex Probe	None known.
Enzyme Strip 1 - well A, B, C, D, E, G, H	None known.

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Enzyme Strip 1 - well F	None known.
Enzyme Strip 2 - well A, B, C, D, E, F, H	None known.
Enzyme Strip 2 - well G	None known.

Section 3. Composition/information on ingredients

Substance/mixture :

RE 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 Cassette 1-16	Mixture
Hybridization Solution	Mixture
Enrichment Control DNA	Mixture
HaloPlex Magnetic Beads	Mixture
HaloPlex Probe	Mixture
Enzyme Strip 1 - well A, B, C, D, E, G, H	Mixture
Enzyme Strip 1 - well F	Mixture
Enzyme Strip 2 - well A, B, C, D, E, F, H	Mixture
Enzyme Strip 2 - well G	Mixture

Ingredient name	%	CAS number
BSA Solution		
Glycerol	1 - 5	56-81-5
DNA Ligase		
Glycerol	30 - 60	56-81-5
Ligation Solution		
Glycerol	1 - 5	56-81-5
Wash Solution		
Formamide	10 - 30	75-12-7
Sodium chloride	5 - 10	7647-14-5
Capture Solution		
Sodium chloride	5 - 10	7647-14-5
Hybridization Solution		
Formamide	30 - 60	75-12-7
Sodium chloride	10 - 30	7647-14-5
Enzyme Strip 1 - well A, B, C, D, E, G, H		
Glycerol	30 - 60	56-81-5
Enzyme Strip 1 - well F		
Glycerol	30 - 60	56-81-5
2-Mercaptoethanol	0.1 - 1	60-24-2

Section 3. Composition/information on ingredients

Enzyme Strip 2 - well A, B, C, D, E, F, H		
Glycerol	30 - 60	56-81-5
Enzyme Strip 2 - well G		
Glycerol	30 - 60	56-81-5
Sodium chloride	1 - 5	7647-14-5

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

Description of necessary first aid measures

Eye contact :

RE Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
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.
BSA 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 following exposure or if feeling unwell.
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. Get medical attention following exposure or if feeling unwell.
Ligation 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 following exposure or if feeling unwell.
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.

Section 4. First aid measures

		HaloPlex Barcoding Primer Cassette 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.
		HaloPlex Magnetic Beads	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 Probe	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	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 following exposure or if feeling unwell.
		Enzyme Strip 1 - well F	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 following exposure or if feeling unwell.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	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 following exposure or if feeling unwell.
		Enzyme Strip 2 - well G	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 following exposure or if feeling unwell.
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. 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 following exposure or if feeling unwell. If

Section 4. First aid measures

	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.
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 following exposure or if feeling unwell. 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. 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 following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Wash 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 Cassette 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

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	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.
Enrichment Control DNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HaloPlex Magnetic Beads	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
HaloPlex Probe	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Enzyme Strip 1 - well A, B, C, D, E, G, H	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 following exposure or if feeling unwell. 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 1 - well F	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 following exposure or if feeling unwell. 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 - well A, B, C, D, E, F, H	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 following exposure or if feeling unwell. 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 - well G	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

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			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 following exposure or if feeling unwell. 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. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		DNA Ligase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Ligation Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		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. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		HaloPlex ION Primer 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		HaloPlex ION Primer 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		HaloPlex Barcoding Primer Cassette 1-16	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Hybridization Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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		Enrichment Control DNA	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		HaloPlex Magnetic Beads	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		HaloPlex Probe	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Enzyme Strip 1 - well F	Wash with plenty of soap and 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. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Enzyme Strip 2 - well G	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.
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 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

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

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	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 Cassette 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.
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.
HaloPlex Magnetic Beads	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 Probe	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 - well A, B, C, D, E,	Wash out mouth with water. Remove dentures if

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G, H	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 following exposure or if feeling unwell. 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 1 - well F	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 following exposure or if feeling unwell. 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 - well A, B, C, D, E, F, H	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 following exposure or if feeling unwell. 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 - well G	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 following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If

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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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye 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	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 Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Causes eye irritation.
		Enzyme Strip 1 - well F	Causes eye irritation.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Causes eye irritation.
		Enzyme Strip 2 - well G	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	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		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 Cassette 1-16	No known significant effects or critical hazards.
		Hybridization Solution	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		Enrichment Control DNA	No known significant effects or critical hazards.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	No known significant effects or critical hazards.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	No known significant effects or critical hazards.

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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 Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	May cause an allergic skin reaction.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	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	May be irritating to mouth, throat and stomach.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	Irritating to mouth, throat and stomach.
		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 Cassette 1-16	No known significant effects or critical hazards.
		Hybridization Solution	Irritating to mouth, throat and stomach.
		Enrichment Control DNA	No known significant effects or critical hazards.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	May be irritating to mouth, throat and stomach.
		Enzyme Strip 1 - well F	May be irritating to mouth, throat and stomach.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	May be irritating to mouth, throat and stomach.
		Enzyme Strip 2 - well G	May be irritating to mouth, throat and stomach.

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.

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		HaloPlex Barcoding Primer Cassette 1-16	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: pain or irritation watering redness
		Enrichment Control DNA	No specific data.
		HaloPlex Magnetic Beads	No specific data.
		HaloPlex Probe	No specific data.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Adverse symptoms may include the following: irritation watering redness
		Enzyme Strip 1 - well F	Adverse symptoms may include the following: irritation watering redness
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Adverse symptoms may include the following: irritation watering redness
		Enzyme Strip 2 - well G	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 Cassette 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.
		HaloPlex Magnetic Beads	No specific data.
		HaloPlex Probe	No specific data.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
		Enzyme Strip 1 - well F	No specific data.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
		Enzyme Strip 2 - well G	No specific data.

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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 Cassette 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.
		HaloPlex Magnetic Beads	No specific data.
		HaloPlex Probe	No specific data.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
		Enzyme Strip 1 - well F	Adverse symptoms may include the following: irritation redness
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
		Enzyme Strip 2 - well G	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 Cassette 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.
		HaloPlex Magnetic Beads	No specific data.
		HaloPlex Probe	No specific data.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
		Enzyme Strip 1 - well F	No specific data.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
		Enzyme Strip 2 - well G	No specific data.

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

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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.
		Wash 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.
		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 Cassette 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.
		HaloPlex Magnetic Beads	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		HaloPlex Probe	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Enzyme Strip 1 - well F	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Enzyme Strip 2 - well G	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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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 Cassette 1-16	No specific treatment.
		Hybridization Solution	No specific treatment.
		Enrichment Control DNA	No specific treatment.
		HaloPlex Magnetic Beads	No specific treatment.
		HaloPlex Probe	No specific treatment.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific treatment.
		Enzyme Strip 1 - well F	No specific treatment.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific treatment.
		Enzyme Strip 2 - well G	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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		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 Cassette 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.

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	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.
HaloPlex Magnetic Beads	No action shall be taken involving any personal risk or without suitable training.
HaloPlex Probe	No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 1 - well A, B, C, D, E, G, H	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 1 - well F	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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Enzyme Strip 2 - well A, B, C, D, E, F, H	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 - well G	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

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.
		HaloPlex Barcoding Primer Cassette 1-16	Use an extinguishing agent suitable for the surrounding fire.
		Hybridization Solution	Use an extinguishing agent suitable for the surrounding fire.
		Enrichment Control DNA	Use an extinguishing agent suitable for the surrounding fire.
		HaloPlex Magnetic Beads	Use an extinguishing agent suitable for the surrounding fire.
		HaloPlex Probe	Use an extinguishing agent suitable for the

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		surrounding fire.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 1 - well F	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 2 - well G	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media :	RE Buffer	None known.
	SSC Buffer	None known.
	BSA Solution	None known.
	DNA Ligase	None known.
	Ligation Solution	None known.
	Wash Solution	None known.
	Capture Solution	None known.
	HaloPlex ION Primer 1	None known.
	HaloPlex ION Primer 2	None known.
	HaloPlex Barcoding Primer Cassette 1-16	None known.
	Hybridization Solution	None known.
	Enrichment Control DNA	None known.
	HaloPlex Magnetic Beads	None known.
	HaloPlex Probe	None known.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	None known.
	Enzyme Strip 1 - well F	None known.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	None known.
	Enzyme Strip 2 - well G	None known.
Specific hazards arising from the chemical :	RE Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	SSC Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	BSA Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	DNA Ligase	In a fire or if heated, a pressure increase will occur and the container may burst.
	Ligation Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	Wash Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	Capture Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	HaloPlex ION Primer 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	HaloPlex ION Primer 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	HaloPlex Barcoding Primer Cassette 1-16	In a fire or if heated, a pressure increase will occur and the container may burst.
	Hybridization Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	Enrichment Control DNA	In a fire or if heated, a pressure increase will occur and the container may burst.
	HaloPlex Magnetic Beads	In a fire or if heated, a pressure increase will occur and the container may burst.
	HaloPlex Probe	In a fire or if heated, a pressure increase will occur

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		and the container may burst.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	In a fire or if heated, a pressure increase will occur and the container may burst.
	Enzyme Strip 1 - well F	In a fire or if heated, a pressure increase will occur and the container may burst.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	In a fire or if heated, a pressure increase will occur and the container may burst.
	Enzyme Strip 2 - well G	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

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 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 Cassette 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

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			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.
		HaloPlex Magnetic Beads	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 Probe	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	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 - well F	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 - well A, B, C, D, E, F, H	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 - well G	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	RE Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		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 equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Wash Solution	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

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	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 Cassette 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.
HaloPlex Magnetic Beads	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
HaloPlex Probe	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 - well A, B, C, D, E, G, H	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 - well F	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 - well A, B, C, D, E, F, H	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 - well G	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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

Section 6. Accidental release measures

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

Section 6. Accidental release measures

	waterways, soil or air).
HaloPlex Magnetic Beads	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 Probe	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enzyme Strip 1 - well A, B, C, D, E, G, H	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 - well F	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 - well A, B, C, D, E, F, H	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 - well G	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).

Methods and materials for containment and cleaning up

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

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	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 Cassette 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.
HaloPlex Magnetic Beads	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 Probe	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 - well A, B, C, D, E, G, H	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 - well F	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 - well A, B, C, D, E, F, H	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 - well G	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	RE 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). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an

Section 7. Handling and storage

	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.
DNA Ligase	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.
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 Cassette 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 (see Section 8).
HaloPlex Magnetic Beads	Put on appropriate personal protective equipment

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		(see Section 8).
	HaloPlex Probe	Put on appropriate personal protective equipment (see Section 8).
	Enzyme Strip 1 - well A, B, C, D, E, G, H	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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 - well F	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Enzyme Strip 2 - well G	Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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 : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities :	RE Buffer	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.
	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

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	and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
BSA Solution	Store 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.
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.
Ligation Solution	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.
Wash Solution	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. 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.
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

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

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	containment to avoid environmental contamination.
HaloPlex Magnetic Beads	Store between the following temperatures: 4 to 25°C (39.2 to 77°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
HaloPlex Probe	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Enzyme Strip 1 - well A, B, C, D, E, G, H	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.
Enzyme Strip 1 - well F	Store between the following temperatures: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Enzyme Strip 2 - well A, B, C, D, E, F, H	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

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	containment to avoid environmental contamination.
Enzyme Strip 2 - well G	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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
BSA Solution Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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
DNA Ligase Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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
Ligation Solution Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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

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Wash Solution	
Formamide	**ACGIH TLV (United States, 3/2012).** **Absorbed through skin.** TWA: 10 ppm 8 hours. TWA: 18 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 20 ppm 8 hours. TWA: 30 mg/m³ 8 hours. STEL: 30 ppm 15 minutes. STEL: 45 mg/m³ 15 minutes. **NIOSH REL (United States, 1/2013).** **Absorbed through skin.** TWA: 10 ppm 10 hours. TWA: 15 mg/m³ 10 hours.
Hybridization Solution	
Formamide	**ACGIH TLV (United States, 3/2012).** **Absorbed through skin.** TWA: 10 ppm 8 hours. TWA: 18 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 20 ppm 8 hours. TWA: 30 mg/m³ 8 hours. STEL: 30 ppm 15 minutes. STEL: 45 mg/m³ 15 minutes. **NIOSH REL (United States, 1/2013).** **Absorbed through skin.** TWA: 10 ppm 10 hours. TWA: 15 mg/m³ 10 hours.
Enzyme Strip 1 - well A, B, C, D, E, G, H	
Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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
Enzyme Strip 1 - well F	
Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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
2-Mercaptoethanol	**AIHA WEEL (United States, 10/2011).** **Absorbed through skin.** TWA: 0.2 ppm 8 hours.

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Enzyme Strip 2 - well A, B, C, D, E, F, H Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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
Enzyme Strip 2 - well G Glycerol	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/m³ 8 hours. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **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

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

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

Individual protection measures

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

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

Skin protection

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

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

Section 8. Exposure controls/personal protection

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

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state :

RE Buffer	Liquid.
SSC Buffer	Liquid.
BSA Solution	Liquid. [Clear.]
DNA Ligase	Liquid. [Viscous liquid.]
Ligation Solution	Liquid.
Wash Solution	Liquid.
Capture Solution	Liquid.
HaloPlex ION Primer 1	Liquid.
HaloPlex ION Primer 2	Liquid.
HaloPlex Barcoding Primer Cassette 1-16	Liquid.
Hybridization Solution	Liquid.
Enrichment Control DNA	Liquid.
HaloPlex Magnetic Beads	Liquid. [aqueous suspensions]
HaloPlex Probe	Liquid.
Enzyme Strip 1 - well A, B, C, D, E, G, H	Liquid. [Clear.]
Enzyme Strip 1 - well F	Liquid. [Clear.]
Enzyme Strip 2 - well A, B, C, D, E, F, H	Liquid. [Clear.]
Enzyme Strip 2 - well G	Liquid. [Clear.]

Color :

RE Buffer	Not available.
SSC Buffer	Not available.
BSA Solution	Colorless.
DNA Ligase	Colorless.
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 Cassette 1-16	Not available.
Hybridization Solution	Not available.
Enrichment Control DNA	Not available.
HaloPlex Magnetic Beads	Brown.
HaloPlex Probe	Not available.
Enzyme Strip 1 - well A, B, C, D, E, G, H	Colorless.
Enzyme Strip 1 - well F	Colorless.
Enzyme Strip 2 - well A, B, C, D, E, F, H	Colorless.
Enzyme Strip 2 - well G	Colorless.

Section 9. Physical and chemical properties

Odor	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Odorless.
		DNA Ligase	Odorless.
		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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Odorless.
		Enzyme Strip 1 - well F	Odorless.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Odorless.
		Enzyme Strip 2 - well G	Odorless.
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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Not available.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	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 Cassette 1-16	Not available.
		Hybridization Solution	7.5
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E,	Not available.

Section 9. Physical and chemical properties

		G, H	
		Enzyme Strip 1 - well F	5.5 to 8
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.
Melting point	:	RE Buffer	0°C (32°F)
		SSC Buffer	0°C (32°F)
		BSA Solution	20°C (68°F)
		DNA Ligase	-23°C (-9.4°F)
		Ligation Solution	Not available.
		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 Cassette 1-16	0°C (32°F)
		Hybridization Solution	Not available.
		Enrichment Control DNA	0°C (32°F)
		HaloPlex Magnetic Beads	~0°C (32°F)
		HaloPlex Probe	0°C (32°F)
		Enzyme Strip 1 - well A, B, C, D, E, G, H	20°C (68°F)
		Enzyme Strip 1 - well F	20°C (68°F)
		Enzyme Strip 2 - well A, B, C, D, E, F, H	20°C (68°F)
		Enzyme Strip 2 - well G	20°C (68°F)
Boiling point	:	RE Buffer	100°C (212°F)
		SSC Buffer	100°C (212°F)
		BSA Solution	182°C (359.6°F)
		DNA Ligase	182°C (359.6°F)
		Ligation Solution	Not available.
		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 Cassette 1-16	100°C (212°F)
		Hybridization Solution	Not available.
		Enrichment Control DNA	100°C (212°F)
		HaloPlex Magnetic Beads	100°C (212°F)
		HaloPlex Probe	100°C (212°F)
		Enzyme Strip 1 - well A, B, C, D, E, G, H	182°C (359.6°F)
		Enzyme Strip 1 - well F	182°C (359.6°F)
		Enzyme Strip 2 - well A, B, C, D, E, F, H	182°C (359.6°F)
		Enzyme Strip 2 - well G	182°C (359.6°F)
Flash point	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	Closed cup: 160°C (320°F)
		DNA Ligase	Open cup: 176°C (348.8°F)
		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 Cassette 1-16	Not available.

Section 9. Physical and chemical properties

		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Closed cup: 160°C (320°F)
		Enzyme Strip 1 - well F	Closed cup: >200°C (>392°F)
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Closed cup: 160°C (320°F)
		Enzyme Strip 2 - well G	Closed cup: 160°C (320°F)
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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Not available.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.
Flammability (solid, gas)	:	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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Not available.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.

Section 9. Physical and chemical properties

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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Lower: 0.9%
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.
Vapor pressure	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	<0.13 kPa (<1 mm Hg) [room temperature]
		DNA Ligase	0.4 kPa (3 mm Hg) [room temperature]
		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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	2.3 kPa (17.5 mm Hg) [room temperature]
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	<0.13 kPa (<1 mm Hg) [room temperature]
		Enzyme Strip 1 - well F	<0.13 kPa (<1 mm Hg) [room temperature]
		Enzyme Strip 2 - well A, B, C, D, E, F, H	<0.13 kPa (<1 mm Hg) [room temperature]
		Enzyme Strip 2 - well G	<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	3.1 [Air = 1]
		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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	0.624 [Air = 1]
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E,	3.1 [Air = 1]

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		G, H	
		Enzyme Strip 1 - well F	3.1 [Air = 1]
		Enzyme Strip 2 - well A, B, C, D, E, F, H	3.1 [Air = 1]
		Enzyme Strip 2 - well G	3.1 [Air = 1]
Relative density	:	RE Buffer	Not available.
		SSC Buffer	Not available.
		BSA Solution	1.262
		DNA Ligase	1.261
		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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	1.4 to 1.5
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	1.262
		Enzyme Strip 1 - well F	1.262
		Enzyme Strip 2 - well A, B, C, D, E, F, H	1.262
		Enzyme Strip 2 - well G	1.262
Solubility	:	RE Buffer	Easily soluble in the following materials: cold water and hot water.
		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 Cassette 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.
		HaloPlex Magnetic Beads	Insoluble in the following materials: cold water and hot water.
		HaloPlex Probe	Easily soluble in the following materials: cold water and hot water.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Soluble in the following materials: cold water and hot water.
		Enzyme Strip 1 - well F	Soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

		Enzyme Strip 2 - well A, B, C, D, E, F, H	Soluble in the following materials: cold water and hot water.
		Enzyme Strip 2 - well G	Soluble in the following materials: cold water and hot water.
Solubility in water	:	Not available.	
Partition coefficient: n-octanol/water	:	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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Not available.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.
Auto-ignition temperature	:	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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	370°C (698°F)
		Enzyme Strip 1 - well F	370°C (698°F)
		Enzyme Strip 2 - well A, B, C, D, E, F, H	370°C (698°F)
		Enzyme Strip 2 - well G	370°C (698°F)
Decomposition temperature	:	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.

Section 9. Physical and chemical properties

		Cassette 1-16	
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Not available.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.
Viscosity	:	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 Cassette 1-16	Not available.
		Hybridization Solution	Not available.
		Enrichment Control DNA	Not available.
		HaloPlex Magnetic Beads	Not available.
		HaloPlex Probe	Not available.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
		Enzyme Strip 1 - well F	Not available.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
		Enzyme Strip 2 - well G	Not available.

Section 10. Stability and reactivity

Reactivity	:	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.
		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 Cassette 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.

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	HaloPlex Magnetic Beads	No specific test data related to reactivity available for this product or its ingredients.
	HaloPlex Probe	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Strip 1 - well F	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Strip 2 - well G	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability :	RE Buffer	The product is stable.
	SSC Buffer	The product is stable.
	BSA Solution	The product is stable.
	DNA Ligase	The product is stable.
	Ligation Solution	The product is stable.
	Wash Solution	The product is stable.
	Capture Solution	The product is stable.
	HaloPlex ION Primer 1	The product is stable.
	HaloPlex ION Primer 2	The product is stable.
	HaloPlex Barcoding Primer Cassette 1-16	The product is stable.
	Hybridization Solution	The product is stable.
	Enrichment Control DNA	The product is stable.
	HaloPlex Magnetic Beads	The product is stable.
	HaloPlex Probe	The product is stable.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	The product is stable.
	Enzyme Strip 1 - well F	The product is stable.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	The product is stable.
	Enzyme Strip 2 - well G	The product is stable.
Possibility of hazardous reactions :	RE Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	SSC Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	BSA Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	DNA Ligase	Under normal conditions of storage and use, hazardous reactions will not occur.
	Ligation Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Wash Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Capture Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	HaloPlex ION Primer 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	HaloPlex ION Primer 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	HaloPlex Barcoding Primer Cassette 1-16	Under normal conditions of storage and use, hazardous reactions will not occur.
	Hybridization Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enrichment Control DNA	Under normal conditions of storage and use,

Section 10. Stability and reactivity

		hazardous reactions will not occur.
	HaloPlex Magnetic Beads	Under normal conditions of storage and use, hazardous reactions will not occur.
	HaloPlex Probe	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 1 - well F	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 2 - well G	Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid :

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	No specific data.
Capture Solution	No specific data.
HaloPlex ION Primer 1	No specific data.
HaloPlex ION Primer 2	No specific data.
HaloPlex Barcoding Primer Cassette 1-16	No specific data.
Hybridization Solution	No specific data.
Enrichment Control DNA	No specific data.
HaloPlex Magnetic Beads	No specific data.
HaloPlex Probe	No specific data.
Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
Enzyme Strip 1 - well F	No specific data.
Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
Enzyme Strip 2 - well G	No specific data.

Incompatible materials :

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	No specific data.
Capture Solution	No specific data.
HaloPlex ION Primer 1	No specific data.
HaloPlex ION Primer 2	No specific data.
HaloPlex Barcoding Primer Cassette 1-16	No specific data.
Hybridization Solution	No specific data.
Enrichment Control DNA	No specific data.
HaloPlex Magnetic Beads	No specific data.
HaloPlex Probe	No specific data.
Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
Enzyme Strip 1 - well F	No specific data.
Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
Enzyme Strip 2 - well G	No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products	:	RE Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		SSC Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		BSA Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		DNA Ligase	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 Cassette 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.
		HaloPlex Magnetic Beads	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		HaloPlex Probe	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Strip 1 - well F	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Enzyme Strip 2 - well G	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
BSA Solution				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
DNA Ligase				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Ligation Solution				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Wash Solution				
Formamide	LD50 Dermal	Rabbit	17 g/kg	-
	LD50 Oral	Rat	4000 mg/kg	-
Sodium chloride	LC50 Inhalation Dusts and mists	Rat	>42 g/m³	1 hours
	LD50 Oral	Rat	3000 mg/kg	-
Capture Solution				
Sodium chloride	LC50 Inhalation Dusts and mists	Rat	>42 g/m³	1 hours
	LD50 Oral	Rat	3000 mg/kg	-
Hybridization Solution				
Formamide	LD50 Dermal	Rabbit	17 g/kg	-
	LD50 Oral	Rat	4000 mg/kg	-
Sodium chloride	LC50 Inhalation Dusts and mists	Rat	>42 g/m³	1 hours
	LD50 Oral	Rat	3000 mg/kg	-
Enzyme Strip 1 - well A, B, C, D, E, G, H				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Enzyme Strip 1 - well F				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
2-Mercaptoethanol	LD50 Dermal	Rabbit	200 mg/kg	-
	LD50 Oral	Rat	244 mg/kg	-
Enzyme Strip 2 - well A, B, C, D, E, F, H				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Enzyme Strip 2 - well G				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Sodium chloride	LC50 Inhalation Dusts and mists	Rat	>42 g/m³	1 hours
	LD50 Oral	Rat	3000 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	-

Section 11. Toxicological information

				milligrams	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Ligation Solution					
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	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Capture Solution					
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Hybridization Solution					
Formamide	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Enzyme Strip 1 - well A, B, C, D, E, G, H					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Enzyme Strip 1 - well F					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
2-Mercaptoethanol	Eyes - Severe irritant	Rabbit	-	2 milligrams	-
Enzyme Strip 2 - well A, B, C, D, E, F, H					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Enzyme Strip 2 - well G					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500	-

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				milligrams	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Sodium chloride	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Enzyme Strip 1 - well F 2-Mercaptoethanol	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
BSA Solution Glycerol	Category 2	Inhalation	kidneys
DNA Ligase Glycerol	Category 2	Inhalation	kidneys
Ligation Solution Glycerol	Category 2	Inhalation	kidneys
Enzyme Strip 1 - well A, B, C, D, E, G, H Glycerol	Category 2	Inhalation	kidneys
Enzyme Strip 1 - well F Glycerol	Category 2	Inhalation	kidneys
Enzyme Strip 2 - well A, B, C, D, E, F, H Glycerol	Category 2	Inhalation	kidneys
Enzyme Strip 2 - well G Glycerol	Category 2	Inhalation	kidneys

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye 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	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 Cassette 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.
	HaloPlex Magnetic Beads	No known significant effects or critical hazards.
	HaloPlex Probe	No known significant effects or critical hazards.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	Causes eye irritation.
	Enzyme Strip 1 - well F	Causes eye irritation.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	Causes eye irritation.
	Enzyme Strip 2 - well G	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	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	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 Cassette 1-16	No known significant effects or critical hazards.
	Hybridization Solution	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	Enrichment Control DNA	No known significant effects or critical hazards.
	HaloPlex Magnetic Beads	No known significant effects or critical hazards.
	HaloPlex Probe	No known significant effects or critical hazards.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
	Enzyme Strip 1 - well F	No known significant effects or critical hazards.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
	Enzyme Strip 2 - well G	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.

Section 11. Toxicological information

		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 Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	May cause an allergic skin reaction.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	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	May be irritating to mouth, throat and stomach.
		Ligation Solution	No known significant effects or critical hazards.
		Wash Solution	Irritating to mouth, throat and stomach.
		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 Cassette 1-16	No known significant effects or critical hazards.
		Hybridization Solution	Irritating to mouth, throat and stomach.
		Enrichment Control DNA	No known significant effects or critical hazards.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	May be irritating to mouth, throat and stomach.
		Enzyme Strip 1 - well F	May be irritating to mouth, throat and stomach.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	May be irritating to mouth, throat and stomach.
		Enzyme Strip 2 - well G	May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

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 Cassette 1-16	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: pain or irritation watering redness

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		Enrichment Control DNA	No specific data.
		HaloPlex Magnetic Beads	No specific data.
		HaloPlex Probe	No specific data.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	Adverse symptoms may include the following: irritation watering redness
		Enzyme Strip 1 - well F	Adverse symptoms may include the following: irritation watering redness
		Enzyme Strip 2 - well A, B, C, D, E, F, H	Adverse symptoms may include the following: irritation watering redness
		Enzyme Strip 2 - well G	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 Cassette 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.
		HaloPlex Magnetic Beads	No specific data.
		HaloPlex Probe	No specific data.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
		Enzyme Strip 1 - well F	No specific data.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
		Enzyme Strip 2 - well G	No specific data.
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.

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	HaloPlex Barcoding Primer Cassette 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.
	HaloPlex Magnetic Beads	No specific data.
	HaloPlex Probe	No specific data.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
	Enzyme Strip 1 - well F	Adverse symptoms may include the following: irritation redness
	Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
	Enzyme Strip 2 - well G	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 Cassette 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.
	HaloPlex Magnetic Beads	No specific data.
	HaloPlex Probe	No specific data.
	Enzyme Strip 1 - well A, B, C, D, E, G, H	No specific data.
	Enzyme Strip 1 - well F	No specific data.
	Enzyme Strip 2 - well A, B, C, D, E, F, H	No specific data.
	Enzyme Strip 2 - well G	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

Not available.

Section 11. Toxicological information

General	:	RE Buffer	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		BSA Solution	May cause damage to organs through prolonged or repeated exposure if inhaled.
		DNA Ligase	May cause damage to organs through prolonged or repeated exposure if inhaled.
		Ligation Solution	May cause damage to organs through prolonged or repeated exposure if inhaled.
		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 Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	May cause damage to organs through prolonged or repeated exposure if inhaled.
		Enzyme Strip 1 - well F	May cause damage to organs through prolonged or repeated exposure if inhaled. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	May cause damage to organs through prolonged or repeated exposure if inhaled.
		Enzyme Strip 2 - well G	May cause damage to organs through prolonged or repeated exposure if inhaled.
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 Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	No known significant effects or critical hazards.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	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.

Section 11. Toxicological information

		HaloPlex Barcoding Primer Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	No known significant effects or critical hazards.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	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 Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	No known significant effects or critical hazards.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	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.
		HaloPlex Barcoding Primer Cassette 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.
		HaloPlex Magnetic Beads	No known significant effects or critical hazards.
		HaloPlex Probe	No known significant effects or critical hazards.
		Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
		Enzyme Strip 1 - well F	No known significant effects or critical hazards.
		Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
		Enzyme Strip 2 - well G	No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility 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.
HaloPlex Barcoding Primer Cassette 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.
HaloPlex Magnetic Beads	No known significant effects or critical hazards.
HaloPlex Probe	No known significant effects or critical hazards.
Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
Enzyme Strip 1 - well F	No known significant effects or critical hazards.
Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
Enzyme Strip 2 - well G	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Wash Solution	
Oral	14423.1 mg/kg
Capture Solution	
Oral	51724.1 mg/kg
Hybridization Solution	
Oral	8119.1 mg/kg
Enzyme Strip 2 - well G	
Oral	200000 mg/kg

Other information :

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 Cassette 1-16	Not available.
Hybridization Solution	Not available.
Enrichment Control DNA	Not available.
HaloPlex Magnetic Beads	Not available.
HaloPlex Probe	Not available.
Enzyme Strip 1 - well A, B, C, D, E, G, H	Not available.
Enzyme Strip 1 - well F	Not available.

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Enzyme Strip 2 - well A, B, C, D, E, F, H	Not available.
Enzyme Strip 2 - well G	Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Wash Solution			
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
Capture Solution			
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
Hybridization Solution			
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks
Enzyme Strip 2 - well G			
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis - Larvae	96 hours
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks

Persistence and degradability

Not available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
BSA Solution			
Glycerol	-1.76	-	low
DNA Ligase			
Glycerol	-1.76	-	low
Ligation Solution			
Glycerol	-1.76	-	low
Wash Solution			
Formamide	-0.82	-	low
Hybridization Solution			
Formamide	-0.82	-	low
Enzyme Strip 1 - well A, B, C, D, E, G, H			
Glycerol	-1.76	-	low
Enzyme Strip 1 - well F			
Glycerol	-1.76	-	low
2-Mercaptoethanol	-0.056	-	low
Enzyme Strip 2 - well A, B, C, D, E, F, H			
Glycerol	-1.76	-	low
Enzyme Strip 2 - well G			
Glycerol	-1.76	-	low

Mobility in soil

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

Other adverse 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.
HaloPlex Barcoding Primer Cassette 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.
HaloPlex Magnetic Beads	No known significant effects or critical hazards.
HaloPlex Probe	No known significant effects or critical hazards.
Enzyme Strip 1 - well A, B, C, D, E, G, H	No known significant effects or critical hazards.
Enzyme Strip 1 - well F	No known significant effects or critical hazards.
Enzyme Strip 2 - well A, B, C, D, E, F, H	No known significant effects or critical hazards.
Enzyme Strip 2 - well G	No known significant effects or critical hazards.

Section 13. Disposal considerations

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

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

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

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

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA / : Not regulated.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Formamide

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

Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
HaloPlex Magnetic Beads Sodium azide	< 0.1	Yes.	-	-	-	-

SARA 304 RQ : Not applicable.

Section 15. Regulatory information

SARA 311/312

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

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
BSA Solution						
Glycerol	1 - 5	No.	No.	No.	Yes.	Yes.
DNA Ligase						
Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.
Ligation Solution						
Glycerol	1 - 5	No.	No.	No.	Yes.	Yes.
Wash Solution						
Formamide	10 - 30	No.	No.	No.	Yes.	Yes.
Sodium chloride	5 - 10	No.	No.	No.	Yes.	No.
Capture Solution						
Sodium chloride	5 - 10	No.	No.	No.	Yes.	No.
Hybridization Solution						
Formamide	30 - 60	No.	No.	No.	Yes.	Yes.
Sodium chloride	10 - 30	No.	No.	No.	Yes.	No.
Enzyme Strip 1 - well A, B, C, D, E, G, H						
Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.
Enzyme Strip 1 - well F						
Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.
2-Mercaptoethanol	0.1 - 1	Yes.	No.	No.	Yes.	No.
Enzyme Strip 2 - well A, B, C, D, E, F, H						
Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.
Enzyme Strip 2 - well G						
Glycerol	30 - 60	No.	No.	No.	Yes.	Yes.
Sodium chloride	1 - 5	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

California Prop. 65

No products were found.

Canada inventory : Not determined.

International regulations

Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory: Not determined.
Korea inventory: Not determined.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

History

Date of issue : 07/25/2013.

Date of previous issue : 07/25/2013.

Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

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