SAFETY DATA SHEET

Agilent Technologies

HaloPlex 1-500kb with 15000-20000 Probes - ILM - Box 1 - 48 Reactions

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : HaloPlex 1-500kb with 15000-20000 Probes - ILM - Box 1 - 48 Reactions

Part no. (chemical kit) : 5191-4066, 5191-4067 (RO)

Part no. :

HaloPlex Indexing Primer A01 - H06	5190-8026
Hybridization Solution	5190-5951
Wash Solution	5190-5953
Capture Solution	5190-5954
RE Buffer	5190-5956
Enrichment Control DNA	5190-5957
Primer 1	5190-5958
Primer 2	5190-5959
SSC Buffer	5190-5960
Enzyme Strip 1	5190-5961
Enzyme Strip 2	5190-5962
BSA Solution	5190-5963
Ligation Solution	5190-7832
DNA Ligase	5190-7829
HaloPlex Probe, 48 Reactions	5191-4070 / 5191-4071 (RO)

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

Identified uses : Analytical reagent.
For research use only.

HaloPlex Indexing Primer A01 - H06	48 x 0.015 ml (48 reactions)
Hybridization Solution	3.5 ml (48 reactions)
Wash Solution	7 ml (48 reactions)
Capture Solution	2.4 ml (48 reactions)
RE Buffer	2.4 ml (48 reactions)
Enrichment Control DNA	0.24 ml (48 reactions)
Primer 1	0.068 ml (48 reactions)
Primer 2	0.068 ml (48 reactions)
SSC Buffer	8.15 ml (48 reactions)
Enzyme Strip 1	0.368 ml (48 reactions)
Enzyme Strip 2	0.368 ml (48 reactions)
BSA Solution	0.058 ml (48 reactions)
Ligation Solution	3.25 ml (48 reactions)
DNA Ligase	0.17 ml (48 reactions)
HaloPlex Probe, 48 Reactions	0.96 ml (48 reactions)

Uses advised against : Not for use in diagnostic procedures.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Deutschland GmbH
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition :

HaloPlex Indexing Primer A01 - H06	Mixture
Hybridization Solution	Mixture
Wash Solution	Mixture
Capture Solution	Mixture
RE Buffer	Mixture
Enrichment Control DNA	Mixture
Primer 1	Mixture
Primer 2	Mixture
SSC Buffer	Mixture
Enzyme Strip 1	Mixture
Enzyme Strip 2	Mixture
BSA Solution	Mixture
Ligation Solution	Mixture
DNA Ligase	Mixture
HaloPlex Probe, 48 Reactions	Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Hybridization Solution

H351	CARCINOGENICITY	Category 2
H360D	REPRODUCTIVE TOXICITY	Category 1B
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	Category 2

Wash Solution

H351	CARCINOGENICITY	Category 2
H360D	REPRODUCTIVE TOXICITY	Category 1B
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	Category 2

HaloPlex Indexing Primer A01 - H06	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Hybridization Solution	The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Wash Solution	The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Capture Solution	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
RE Buffer	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Enrichment Control DNA	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Primer 1	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Primer 2	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
SSC Buffer	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Enzyme Strip 1	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
Enzyme Strip 2	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
BSA Solution	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

SECTION 2: Hazards identification

Ligation Solution	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
DNA Ligase	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
HaloPlex Probe, 48 Reactions	The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity :

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

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms : Hybridization Solution

Wash Solution

Signal word :

HaloPlex Indexing Primer A01 - H06	No signal word.
Hybridization Solution	Danger
Wash Solution	Danger
Capture Solution	No signal word.
RE Buffer	No signal word.
Enrichment Control DNA	No signal word.
Primer 1	No signal word.
Primer 2	No signal word.
SSC Buffer	No signal word.
Enzyme Strip 1	No signal word.
Enzyme Strip 2	No signal word.
BSA Solution	No signal word.
Ligation Solution	No signal word.
DNA Ligase	No signal word.
HaloPlex Probe, 48 Reactions	No signal word.

Hazard statements :

HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
Hybridization Solution	H351 - Suspected of causing cancer. H360D - May damage the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Wash Solution	H351 - Suspected of causing cancer. H360D - May damage the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.

SECTION 2: Hazards identification

Capture Solution	No known significant effects or critical hazards.
RE Buffer	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Primer 1	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
SSC Buffer	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Ligation Solution	No known significant effects or critical hazards.
DNA Ligase	No known significant effects or critical hazards.
HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

Precautionary statements

Prevention :

HaloPlex Indexing Primer A01 - H06	Not applicable.
Hybridization Solution	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P260 - Do not breathe vapour.
Wash Solution	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P260 - Do not breathe vapour.
Capture Solution	Not applicable.
RE Buffer	Not applicable.
Enrichment Control DNA	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
SSC Buffer	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
BSA Solution	Not applicable.
Ligation Solution	Not applicable.
DNA Ligase	Not applicable.
HaloPlex Probe, 48 Reactions	Not applicable.

Response :

HaloPlex Indexing Primer A01 - H06	Not applicable.
Hybridization Solution	P308 + P313 - IF exposed or concerned: Get medical advice or attention.
Wash Solution	P308 + P313 - IF exposed or concerned: Get medical advice or attention.
Capture Solution	Not applicable.
RE Buffer	Not applicable.
Enrichment Control DNA	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
SSC Buffer	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
BSA Solution	Not applicable.
Ligation Solution	Not applicable.
DNA Ligase	Not applicable.
HaloPlex Probe, 48 Reactions	Not applicable.

SECTION 2: Hazards identification

Storage	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	Not applicable.
		Wash Solution	Not applicable.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.
Disposal	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Wash Solution	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.
Hazardous ingredients	:	Hybridization Solution	- Formamide
		Wash Solution	- Formamide
Supplemental label elements	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	Not applicable.
		Wash Solution	Not applicable.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	Restricted to professional users.
		Wash Solution	Restricted to professional users.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.

Special packaging requirements

Tactile warning of danger	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	Not applicable.
		Wash Solution	Not applicable.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	:	HaloPlex Indexing Primer A01 - H06	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Hybridization Solution	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Wash Solution	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Capture Solution	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		RE Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Enrichment Control DNA	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Primer 1	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Primer 2	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		SSC Buffer	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Enzyme Strip 1	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		Enzyme Strip 2	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
		BSA Solution	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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	Ligation Solution	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	DNA Ligase	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
	HaloPlex Probe, 48 Reactions	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification :

HaloPlex Indexing Primer A01 - H06	None known.
Hybridization Solution	None known.
Wash Solution	None known.
Capture Solution	None known.
RE Buffer	None known.
Enrichment Control DNA	None known.
Primer 1	None known.
Primer 2	None known.
SSC Buffer	None known.
Enzyme Strip 1	None known.
Enzyme Strip 2	None known.
BSA Solution	None known.
Ligation Solution	Contains one or more substances considered to have endocrine-disrupting properties.
DNA Ligase	Contains one or more substances considered to have endocrine-disrupting properties.
HaloPlex Probe, 48 Reactions	None known.

Substances identified as having endocrine disruptor properties :

Ingredient name	Impact
Ligation Solution	
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Environment
DNA Ligase	
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Environment

SECTION 3: Composition/information on ingredients

3.1 Substances :

HaloPlex Indexing Primer A01 - H06	Mixture
Hybridization Solution	Mixture
Wash Solution	Mixture
Capture Solution	Mixture
RE Buffer	Mixture
Enrichment Control DNA	Mixture
Primer 1	Mixture
Primer 2	Mixture
SSC Buffer	Mixture
Enzyme Strip 1	Mixture
Enzyme Strip 2	Mixture
BSA Solution	Mixture
Ligation Solution	Mixture
DNA Ligase	Mixture
HaloPlex Probe, 48 Reactions	Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Hybridization Solution					
formamide	EC: 200-842-0 CAS: 75-12-7 Index: 616-052-00-8	≥25 - ≤50	Carc. 2, H351 Repr. 1B, H360D STOT RE 2, H373 (blood) (oral)	-	[1] [2]
Wash Solution					
formamide	EC: 200-842-0 CAS: 75-12-7 Index: 616-052-00-8	≥10 - ≤25	Carc. 2, H351 Repr. 1B, H360D STOT RE 2, H373 (blood) (oral)	-	[1] [2]
Enzyme Strip 1					
Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	-	[1]
Enzyme Strip 2					
Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	-	[1]
BSA Solution					
Glycerol	EC: 200-289-5 CAS: 56-81-5	≤10	Not classified.	-	[1]
Ligation Solution					
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	<0.25	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg M [Acute] = 10 M [Chronic] = 1	[1] [2]
DNA Ligase					
Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	-	[2]
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	CAS: 9036-19-5	<0.25	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	ATE [Oral] = 500 mg/kg M [Acute] = 10 M [Chronic] = 1	[1] [3]

SECTION 3: Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type	
Hybridization Solution	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit
Wash Solution	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit
Enzyme Strip 1	[1] Substance with a workplace exposure limit
Enzyme Strip 2	[1] Substance with a workplace exposure limit
BSA Solution	[1] Substance with a workplace exposure limit
Ligation Solution	[1] Substance classified with a health or environmental hazard [2] Substance of equivalent concern
DNA Ligase	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit [3] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact :

HaloPlex Indexing Primer A01 - H06	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.
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.
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.
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.
Primer 1	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Primer 2	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
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.
Enzyme Strip 1	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Enzyme Strip 2	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
BSA Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Ligation Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
DNA Ligase	Immediately flush eyes with plenty of water, occasionally

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			lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		HaloPlex Probe, 48 Reactions	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	HaloPlex Indexing Primer A01 - H06	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Hybridization Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		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.
		RE Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Enrichment Control DNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Primer 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Primer 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		SSC Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Enzyme Strip 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Enzyme Strip 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		BSA Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Ligation Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		DNA Ligase	Remove victim to fresh air and keep at rest in a position

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			comfortable for breathing. Get medical attention if symptoms occur.
		HaloPlex Probe, 48 Reactions	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	HaloPlex Indexing Primer A01 - H06	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.
		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.
		RE Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Enrichment Control DNA	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Primer 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Primer 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		SSC Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Enzyme Strip 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Enzyme Strip 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		BSA Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Ligation Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		DNA Ligase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		HaloPlex Probe, 48 Reactions	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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Ingestion	:	HaloPlex Indexing Primer A01 - H06	Wash out mouth with water. 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. 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.
		Wash Solution	Wash out mouth with water. Remove dentures if any. 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. 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.
		RE Buffer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		Enrichment Control DNA	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		Primer 1	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		Primer 2	Wash out mouth with water. 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. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		Enzyme Strip 1	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		Enzyme Strip 2	Wash out mouth with water. If material has been swallowed

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		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. 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.
	Ligation Solution	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	DNA Ligase	Wash out mouth with water. 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, 48 Reactions	Wash out mouth with water. 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.
Protection of first-aiders :	HaloPlex Indexing Primer A01 - H06	No action shall be taken involving any personal risk or without suitable training.
	Hybridization Solution	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	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.
	RE Buffer	No action shall be taken involving any personal risk or without suitable training.
	Enrichment Control DNA	No action shall be taken involving any personal risk or without suitable training.
	Primer 1	No action shall be taken involving any personal risk or without suitable training.
	Primer 2	No action shall be taken involving any personal risk or without suitable training.
	SSC Buffer	No action shall be taken involving any personal risk or without suitable training.
	Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training.
	Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training.
	BSA Solution	No action shall be taken involving any personal risk or without suitable training.
	Ligation Solution	No action shall be taken involving any personal risk or without suitable training.
	DNA Ligase	No action shall be taken involving any personal risk or without suitable training.
	HaloPlex Probe, 48	No action shall be taken involving any personal risk or

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Reactions		without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization 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.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.
Inhalation	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization 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.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.
Skin contact	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization 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.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

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Ingestion	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization 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.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	HaloPlex Indexing Primer A01 - H06	No specific data.
		Hybridization Solution	No specific data.
		Wash Solution	No specific data.
		Capture Solution	No specific data.
		RE Buffer	No specific data.
		Enrichment Control DNA	No specific data.
		Primer 1	No specific data.
		Primer 2	No specific data.
		SSC Buffer	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.
		BSA Solution	No specific data.
		Ligation Solution	No specific data.
		DNA Ligase	No specific data.
		HaloPlex Probe, 48 Reactions	No specific data.
Inhalation	:	HaloPlex Indexing Primer A01 - H06	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Capture Solution	No specific data.
		RE Buffer	No specific data.
		Enrichment Control DNA	No specific data.
		Primer 1	No specific data.
		Primer 2	No specific data.
		SSC Buffer	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.
		BSA Solution	No specific data.
		Ligation Solution	No specific data.
		DNA Ligase	No specific data.
		HaloPlex Probe, 48 Reactions	No specific data.

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Skin contact	:	HaloPlex Indexing Primer A01 - H06	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Capture Solution	No specific data.
		RE Buffer	No specific data.
		Enrichment Control DNA	No specific data.
		Primer 1	No specific data.
		Primer 2	No specific data.
		SSC Buffer	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.
		BSA Solution	No specific data.
		Ligation Solution	No specific data.
		DNA Ligase	No specific data.
		HaloPlex Probe, 48 Reactions	No specific data.
Ingestion	:	HaloPlex Indexing Primer A01 - H06	No specific data.
		Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
		Capture Solution	No specific data.
		RE Buffer	No specific data.
		Enrichment Control DNA	No specific data.
		Primer 1	No specific data.
		Primer 2	No specific data.
		SSC Buffer	No specific data.
		Enzyme Strip 1	No specific data.
		Enzyme Strip 2	No specific data.
		BSA Solution	No specific data.
		Ligation Solution	No specific data.
		DNA Ligase	No specific data.
		HaloPlex Probe, 48 Reactions	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	HaloPlex Indexing Primer A01 - H06	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.
		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.
		RE Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Enrichment Control DNA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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	Primer 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Primer 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	SSC Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Enzyme Strip 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	BSA Solution	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.
	DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	HaloPlex Probe, 48 Reactions	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	HaloPlex Indexing Primer A01 - H06	No specific treatment.
	Hybridization Solution	No specific treatment.
	Wash Solution	No specific treatment.
	Capture Solution	No specific treatment.
	RE Buffer	No specific treatment.
	Enrichment Control DNA	No specific treatment.
	Primer 1	No specific treatment.
	Primer 2	No specific treatment.
	SSC Buffer	No specific treatment.
	Enzyme Strip 1	No specific treatment.
	Enzyme Strip 2	No specific treatment.
	BSA Solution	No specific treatment.
	Ligation Solution	No specific treatment.
	DNA Ligase	No specific treatment.
	HaloPlex Probe, 48 Reactions	No specific treatment.

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5.1 Extinguishing media

Suitable extinguishing media :	HaloPlex Indexing Primer A01 - H06	Use an extinguishing agent suitable for the surrounding fire.
	Hybridization 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.
	RE Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Enrichment Control DNA	Use an extinguishing agent suitable for the surrounding fire.
	Primer 1	Use an extinguishing agent suitable for the surrounding fire.
	Primer 2	Use an extinguishing agent suitable for the surrounding fire.
	SSC Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 1	Use an extinguishing agent suitable for the surrounding fire.
	Enzyme Strip 2	Use an extinguishing agent suitable for the surrounding fire.
	BSA Solution	Use an extinguishing agent suitable for the surrounding fire.
	Ligation Solution	Use an extinguishing agent suitable for the surrounding fire.
	DNA Ligase	Use an extinguishing agent suitable for the surrounding fire.
	HaloPlex Probe, 48 Reactions	Use an extinguishing agent suitable for the surrounding fire.

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Unsuitable extinguishing media :

HaloPlex Indexing Primer A01 - H06	None known.
Hybridization Solution	None known.
Wash Solution	None known.
Capture Solution	None known.
RE Buffer	None known.
Enrichment Control DNA	None known.
Primer 1	None known.
Primer 2	None known.
SSC Buffer	None known.
Enzyme Strip 1	None known.
Enzyme Strip 2	None known.
BSA Solution	None known.
Ligation Solution	None known.
DNA Ligase	None known.
HaloPlex Probe, 48 Reactions	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :

HaloPlex Indexing Primer A01 - H06	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.
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.
RE Buffer	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.
Primer 1	In a fire or if heated, a pressure increase will occur and the container may burst.
Primer 2	In a fire or if heated, a pressure increase will occur and the container may burst.
SSC Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Enzyme Strip 1	In a fire or if heated, a pressure increase will occur and the container may burst.
Enzyme Strip 2	In a fire or if heated, a pressure increase will occur and the container may burst.
BSA Solution	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.
DNA Ligase	In a fire or if heated, a pressure increase will occur and the container may burst.
HaloPlex Probe, 48 Reactions	In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products :

HaloPlex Indexing Primer A01 - H06	No specific data.
Hybridization Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Wash Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds

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	metal oxide/oxides
Capture Solution	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
RE Buffer	No specific data.
Enrichment Control DNA	No specific data.
Primer 1	No specific data.
Primer 2	No specific data.
SSC Buffer	No specific data.
Enzyme Strip 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Enzyme Strip 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide
BSA Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Ligation Solution	No specific data.
DNA Ligase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
HaloPlex Probe, 48 Reactions	No specific data.

5.3 Advice for firefighters

Special precautions for fire-fighters :

HaloPlex Indexing Primer A01 - H06	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hybridization Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
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.
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.
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.
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.
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.
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.
Enzyme Strip 1	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Enzyme Strip 2	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
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.

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	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.
	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.
	HaloPlex Probe, 48 Reactions	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 :	HaloPlex Indexing Primer A01 - H06	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Primer 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a

SECTION 5: Firefighting measures

	basic level of protection for chemical incidents.
Enzyme Strip 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Enzyme Strip 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
HaloPlex Probe, 48 Reactions	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: HaloPlex Indexing Primer A01 - H06	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	Hybridization Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Wash Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Capture Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.

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	Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
RE Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Enrichment Control DNA	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Primer 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Primer 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
SSC Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Enzyme Strip 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Enzyme Strip 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
BSA Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
Ligation Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
DNA Ligase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
HaloPlex Probe, 48 Reactions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

SECTION 6: Accidental release measures

For emergency responders	:	HaloPlex Indexing Primer A01 - H06	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Hybridization Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Wash Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Capture Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		RE Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Enrichment Control DNA	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Primer 1	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Primer 2	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		SSC Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Enzyme Strip 1	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Enzyme Strip 2	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		BSA Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Ligation Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		DNA Ligase	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		HaloPlex Probe, 48 Reactions	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

6.2 Environmental precautions :

HaloPlex Indexing Primer A01 - H06	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Hybridization Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Wash Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Capture Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
RE Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enrichment Control DNA	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 1	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Primer 2	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
SSC Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enzyme Strip 1	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Enzyme Strip 2	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
BSA Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Ligation Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
DNA Ligase	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
HaloPlex Probe, 48 Reactions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

SECTION 6: Accidental release measures

Methods for cleaning up :

HaloPlex Indexing Primer A01 - H06	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.
Wash Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Capture Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
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.
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.
Primer 1	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Primer 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
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.
Enzyme Strip 1	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Enzyme Strip 2	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
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.
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

SECTION 6: Accidental release measures

	place in an appropriate waste disposal container. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
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. May be harmful to the environment if released. Dispose of spillages under controlled conditions.
HaloPlex Probe, 48 Reactions	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.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures :

HaloPlex Indexing Primer A01 - H06	Put on appropriate personal protective equipment (see Section 8).
Hybridization Solution	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
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 breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Capture Solution	Put on appropriate personal protective equipment (see Section 8).
RE Buffer	Put on appropriate personal protective equipment (see Section 8).
Enrichment Control DNA	Put on appropriate personal protective equipment (see Section 8).
Primer 1	Put on appropriate personal protective equipment (see Section 8).
Primer 2	Put on appropriate personal protective equipment (see Section 8).
SSC Buffer	Put on appropriate personal protective equipment (see Section 8).
Enzyme Strip 1	Put on appropriate personal protective equipment (see Section 8).

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	Enzyme Strip 2	Put on appropriate personal protective equipment (see Section 8).
	BSA Solution	Put on appropriate personal protective equipment (see Section 8).
	Ligation Solution	Put on appropriate personal protective equipment (see Section 8).
	DNA Ligase	Put on appropriate personal protective equipment (see Section 8).
	HaloPlex Probe, 48 Reactions	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene :	HaloPlex Indexing Primer A01 - H06	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Hybridization Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Wash Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Capture Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	RE Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Enrichment Control DNA	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Primer 1	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Primer 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	SSC Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and

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	protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Enzyme Strip 1	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Enzyme Strip 2	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
BSA Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Ligation Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
DNA Ligase	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
HaloPlex Probe, 48 Reactions	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage	: HaloPlex Indexing Primer A01 - H06	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Hybridization Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Wash Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and

SECTION 7: Handling and storage

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

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	been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Enzyme Strip 1	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Enzyme Strip 2	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
BSA Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Ligation Solution	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
DNA Ligase	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
HaloPlex Probe, 48 Reactions	Storage temperature: -20°C (-4°F). Store in accordance with local regulations. Shelf life: 2 years. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use

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

7.3 Specific end use(s)

Recommendations	:	HaloPlex Indexing Primer A01 - H06	Industrial applications, Professional applications.
		Hybridization Solution	Industrial applications, Professional applications.
		Wash Solution	Industrial applications, Professional applications.
		Capture Solution	Industrial applications, Professional applications.
		RE Buffer	Industrial applications, Professional applications.
		Enrichment Control DNA	Industrial applications, Professional applications.
		Primer 1	Industrial applications, Professional applications.
		Primer 2	Industrial applications, Professional applications.
		SSC Buffer	Industrial applications, Professional applications.
		Enzyme Strip 1	Industrial applications, Professional applications.
		Enzyme Strip 2	Industrial applications, Professional applications.
		BSA Solution	Industrial applications, Professional applications.
		Ligation Solution	Industrial applications, Professional applications.
		DNA Ligase	Industrial applications, Professional applications.
		HaloPlex Probe, 48 Reactions	Industrial applications, Professional applications.
Industrial sector specific solutions	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
		BSA Solution	Not available.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Hybridization Solution	
formamide	**NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: Advisory Occupational Exposure Limit Values (OELVs)** OELV-8hr: 10 ppm 8 hours. OELV-8hr: 18 mg/m³ 8 hours.
Wash Solution	
formamide	**NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: Advisory Occupational Exposure Limit Values (OELVs)** OELV-8hr: 10 ppm 8 hours. OELV-8hr: 18 mg/m³ 8 hours.
Enzyme Strip 1	
Glycerol	**NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs)**

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	OELV-8hr: 10 mg/m³ 8 hours. Form: mist
Enzyme Strip 2	
Glycerol	**NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs)** OELV-8hr: 10 mg/m³ 8 hours. Form: mist
BSA Solution	
Glycerol	**NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs)** OELV-8hr: 10 mg/m³ 8 hours. Form: mist
DNA Ligase	
Glycerol	**NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs)** OELV-8hr: 10 mg/m³ 8 hours. Form: mist

Biological exposure indices

None known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hybridization Solution					
formamide	DNEL	Long term Dermal	0.952 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	6.6 mg/m³	Workers	Systemic
Wash Solution					
formamide	DNEL	Long term Dermal	0.952 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	6.6 mg/m³	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

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

Individual protection measures

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

SECTION 8: Exposure controls/personal protection

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

Skin protection

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

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

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

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

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.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state :

HaloPlex Indexing Primer A01 - H06	Liquid.
Hybridization Solution	Liquid.
Wash Solution	Liquid.
Capture Solution	Liquid.
RE Buffer	Liquid.
Enrichment Control DNA	Liquid.
Primer 1	Liquid.
Primer 2	Liquid.
SSC Buffer	Liquid.
Enzyme Strip 1	Liquid. [Clear.]
Enzyme Strip 2	Liquid. [Clear.]
BSA Solution	Liquid. [Clear.]
Ligation Solution	Liquid.
DNA Ligase	Liquid.
HaloPlex Probe, 48 Reactions	Liquid.

Colour :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.

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		SSC Buffer	Not available.
		Enzyme Strip 1	Colourless.
		Enzyme Strip 2	Colourless.
		BSA Solution	Colourless.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.
Odour	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.
		Enzyme Strip 1	Odourless.
		Enzyme Strip 2	Odourless.
		BSA Solution	Odourless.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.
Odour threshold	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
		BSA Solution	Not available.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.
Melting point/freezing point	:	HaloPlex Indexing Primer A01 - H06	0°C
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	0°C
		Enrichment Control DNA	0°C
		Primer 1	0°C
		Primer 2	0°C
		SSC Buffer	0°C
		Enzyme Strip 1	20°C
		Enzyme Strip 2	20°C
		BSA Solution	20°C
		Ligation Solution	0°C
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	0°C

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Initial boiling point and boiling range	:	HaloPlex Indexing Primer A01 - H06	100°C
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	100°C
		Enrichment Control DNA	100°C
		Primer 1	100°C
		Primer 2	100°C
		SSC Buffer	100°C
		Enzyme Strip 1	182°C
		Enzyme Strip 2	182°C
		BSA Solution	182°C
		Ligation Solution	100°C
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	100°C
Flammability	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	Not applicable.
		Wash Solution	Not applicable.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.
Upper/lower flammability or explosive limits	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
		BSA Solution	Not available.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.
Flash point	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.

SECTION 9: Physical and chemical properties

Enzyme Strip 1	Closed cup: 160°C
Enzyme Strip 2	Closed cup: 160°C
BSA Solution	Closed cup: 160°C
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

Ingredient name	Closed cup °C	Closed cup Method	Open cup °C	Open cup Method
Hybridization Solution				
Formamide			152	DIN EN ISO 2592
Wash Solution				
Formamide			152	DIN EN ISO 2592
DNA Ligase				
Glycerol			177	

Auto-ignition temperature :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	370°C
Enzyme Strip 2	370°C
BSA Solution	370°C
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

Ingredient name	°C	Method
Hybridization Solution		
Formamide	>500	ASTM D 2155-66
Wash Solution		
Formamide	>500	ASTM D 2155-66
DNA Ligase		
Glycerol	370	

SECTION 9: Physical and chemical properties

Decomposition temperature :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
BSA Solution	Not available.
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

pH :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	7.5
Wash Solution	7.5
Capture Solution	Not available.
RE Buffer	7.9
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
BSA Solution	Not available.
Ligation Solution	Not available.
DNA Ligase	7.4
HaloPlex Probe, 48 Reactions	Not available.

Viscosity :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
BSA Solution	Not available.
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

Solubility(ies) :

Media	Result
HaloPlex Indexing Primer A01 - H06	
water	Soluble
Hybridization Solution	
water	Soluble
Wash Solution	
water	Soluble
Capture Solution	
water	Soluble

SECTION 9: Physical and chemical properties

	RE Buffer	
	water	Soluble
	Enrichment Control DNA	
	water	Soluble
	Primer 1	
	water	Soluble
	Primer 2	
	water	Soluble
	SSC Buffer	
	water	Soluble
	Enzyme Strip 1	
	water	Soluble
	Enzyme Strip 2	
	water	Soluble
	BSA Solution	
	water	Soluble
	Ligation Solution	
	water	Soluble
	DNA Ligase	
	water	Soluble
	HaloPlex Probe, 48 Reactions	
	water	Soluble

Partition coefficient: n-octanol/water :

HaloPlex Indexing Primer A01 - H06	Not applicable.
Hybridization Solution	Not applicable.
Wash Solution	Not applicable.
Capture Solution	Not applicable.
RE Buffer	Not applicable.
Enrichment Control DNA	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
SSC Buffer	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
BSA Solution	Not applicable.
Ligation Solution	Not applicable.
DNA Ligase	Not applicable.
HaloPlex Probe, 48 Reactions	Not applicable.

Vapour pressure :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	<0.13 kPa (<1 mm Hg)
Enzyme Strip 2	<0.13 kPa (<1 mm Hg)
BSA Solution	<0.13 kPa (<1 mm Hg)
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
HaloPlex Indexing Primer A01 - H06						
water	23.8	3.2		92.258	12.3	
Hybridization Solution						
water	23.8	3.2		92.258	12.3	
Formamide	0.05	0.0067				
Wash Solution						
water	23.8	3.2		92.258	12.3	
Formamide	0.05	0.0067				
Capture Solution						
water	23.8	3.2		92.258	12.3	
RE Buffer						
water	23.8	3.2		92.258	12.3	
Enrichment Control DNA						
water	23.8	3.2		92.258	12.3	
Primer 1						
water	23.8	3.2		92.258	12.3	
Primer 2						
water	23.8	3.2		92.258	12.3	
SSC Buffer						
water	23.8	3.2		92.258	12.3	
Ligation Solution						
water	23.8	3.2		92.258	12.3	
DNA Ligase						
water	23.8	3.2		92.258	12.3	

SECTION 9: Physical and chemical properties

	Glycerol	0.000075	0.00001		0.0025	0.00033
	HaloPlex Probe, 48 Reactions					
	water	23.8	3.2		92.258	12.3

Evaporation rate :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	Not available.
Enzyme Strip 2	Not available.
BSA Solution	Not available.
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

Relative density :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	1.262
Enzyme Strip 2	1.262
BSA Solution	1.262
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

Vapour density :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Not available.
Wash Solution	Not available.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	3.1 [Air = 1]
Enzyme Strip 2	3.1 [Air = 1]
BSA Solution	3.1 [Air = 1]
Ligation Solution	Not available.
DNA Ligase	Not available.
HaloPlex Probe, 48 Reactions	Not available.

SECTION 9: Physical and chemical properties

Explosive properties	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
		BSA Solution	Not available.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.
Oxidising properties	:	HaloPlex Indexing Primer A01 - H06	Not available.
		Hybridization Solution	Not available.
		Wash Solution	Not available.
		Capture Solution	Not available.
		RE Buffer	Not available.
		Enrichment Control DNA	Not available.
		Primer 1	Not available.
		Primer 2	Not available.
		SSC Buffer	Not available.
		Enzyme Strip 1	Not available.
		Enzyme Strip 2	Not available.
		BSA Solution	Not available.
		Ligation Solution	Not available.
		DNA Ligase	Not available.
		HaloPlex Probe, 48 Reactions	Not available.

Particle characteristics

Median particle size	:	HaloPlex Indexing Primer A01 - H06	Not applicable.
		Hybridization Solution	Not applicable.
		Wash Solution	Not applicable.
		Capture Solution	Not applicable.
		RE Buffer	Not applicable.
		Enrichment Control DNA	Not applicable.
		Primer 1	Not applicable.
		Primer 2	Not applicable.
		SSC Buffer	Not applicable.
		Enzyme Strip 1	Not applicable.
		Enzyme Strip 2	Not applicable.
		BSA Solution	Not applicable.
		Ligation Solution	Not applicable.
		DNA Ligase	Not applicable.
		HaloPlex Probe, 48 Reactions	Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: HaloPlex Indexing Primer A01 - H06	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.
	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.
	RE Buffer	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.
	Primer 1	No specific test data related to reactivity available for this product or its ingredients.
	Primer 2	No specific test data related to reactivity available for this product or its ingredients.
	SSC Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Strip 1	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Strip 2	No specific test data related to reactivity available for this product or its ingredients.
	BSA Solution	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.
	DNA Ligase	No specific test data related to reactivity available for this product or its ingredients.
	HaloPlex Probe, 48 Reactions	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: HaloPlex Indexing Primer A01 - H06	The product is stable.
	Hybridization Solution	The product is stable.
	Wash Solution	The product is stable.
	Capture Solution	The product is stable.
	RE Buffer	The product is stable.
	Enrichment Control DNA	The product is stable.
	Primer 1	The product is stable.
	Primer 2	The product is stable.
	SSC Buffer	The product is stable.
	Enzyme Strip 1	The product is stable.
	Enzyme Strip 2	The product is stable.
	BSA Solution	The product is stable.
	Ligation Solution	The product is stable.
	DNA Ligase	The product is stable.
	HaloPlex Probe, 48 Reactions	Shelf life: 2 years.
10.3 Possibility of hazardous reactions	: HaloPlex Indexing Primer A01 - H06	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.
	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.
	RE Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enrichment Control DNA	Under normal conditions of storage and use, hazardous reactions will not occur.
	Primer 1	Under normal conditions of storage and use, hazardous

SECTION 10: Stability and reactivity

		reactions will not occur.
	Primer 2	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.
	Enzyme Strip 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Strip 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	BSA Solution	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.
	DNA Ligase	Under normal conditions of storage and use, hazardous reactions will not occur.
	HaloPlex Probe, 48 Reactions	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid :

HaloPlex Indexing Primer A01 - H06	No specific data.
Hybridization Solution	No specific data.
Wash Solution	No specific data.
Capture Solution	No specific data.
RE Buffer	No specific data.
Enrichment Control DNA	No specific data.
Primer 1	No specific data.
Primer 2	No specific data.
SSC Buffer	No specific data.
Enzyme Strip 1	No specific data.
Enzyme Strip 2	No specific data.
BSA Solution	No specific data.
Ligation Solution	No specific data.
DNA Ligase	No specific data.
HaloPlex Probe, 48 Reactions	No specific data.

10.5 Incompatible materials :

HaloPlex Indexing Primer A01 - H06	May react or be incompatible with oxidising materials.
Hybridization Solution	May react or be incompatible with oxidising materials.
Wash Solution	May react or be incompatible with oxidising materials.
Capture Solution	May react or be incompatible with oxidising materials.
RE Buffer	May react or be incompatible with oxidising materials.
Enrichment Control DNA	May react or be incompatible with oxidising materials.
Primer 1	May react or be incompatible with oxidising materials.
Primer 2	May react or be incompatible with oxidising materials.
SSC Buffer	May react or be incompatible with oxidising materials.
Enzyme Strip 1	May react or be incompatible with oxidising materials.
Enzyme Strip 2	May react or be incompatible with oxidising materials.
BSA Solution	May react or be incompatible with oxidising materials.
Ligation Solution	May react or be incompatible with oxidising materials.
DNA Ligase	May react or be incompatible with oxidising materials.
HaloPlex Probe, 48 Reactions	May react or be incompatible with oxidising materials.

10.6 Hazardous decomposition products :

HaloPlex Indexing Primer A01 - H06	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.
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.

SECTION 10: Stability and reactivity

RE Buffer	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.
Primer 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Primer 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
SSC Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enzyme Strip 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Enzyme Strip 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
BSA Solution	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.
DNA Ligase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
HaloPlex Probe, 48 Reactions	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Hybridization Solution				
formamide	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat - Male Rabbit Rat	>21 mg/l 17 g/kg 4000 mg/kg	4 hours - -
Wash Solution				
formamide	LC50 Inhalation Dusts and mists LD50 Dermal LD50 Oral	Rat - Male Rabbit Rat	>21 mg/l 17 g/kg 4000 mg/kg	4 hours - -
Ligation Solution				
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-
DNA Ligase				
Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	LD50 Oral	Rat	2800 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)

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Hybridization Solution formamide	4000	17000	N/A	N/A	N/A
Wash Solution formamide	4000	17000	N/A	N/A	N/A
Ligation Solution Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	500	N/A	N/A	N/A	N/A
DNA Ligase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hybridization Solution formamide	Eyes - Severe irritant	Rabbit	-	100 mg	-
Wash Solution formamide	Eyes - Severe irritant	Rabbit	-	100 mg	-
Ligation Solution Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-
DNA Ligase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Eyes - Severe irritant	Rabbit	-	1 %	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Hybridization Solution formamide	Category 2	oral	blood
Wash Solution formamide	Category 2	oral	blood

Aspiration hazard

Not available.

SECTION 11: Toxicological information

Information on likely routes of exposure :

HaloPlex Indexing Primer A01 - H06	Not available.
Hybridization Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Wash Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Capture Solution	Not available.
RE Buffer	Not available.
Enrichment Control DNA	Not available.
Primer 1	Not available.
Primer 2	Not available.
SSC Buffer	Not available.
Enzyme Strip 1	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Enzyme Strip 2	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
BSA Solution	Not available.
Ligation Solution	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
DNA Ligase	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
HaloPlex Probe, 48 Reactions	Not available.

Potential acute health effects

Inhalation :

HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
Hybridization 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.
RE Buffer	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Primer 1	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
SSC Buffer	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Ligation Solution	No known significant effects or critical hazards.
DNA Ligase	No known significant effects or critical hazards.
HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

Ingestion :

HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
Hybridization 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.
RE Buffer	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Primer 1	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
SSC Buffer	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Ligation Solution	No known significant effects or critical hazards.
DNA Ligase	No known significant effects or critical hazards.
HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

Skin contact :

HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
Hybridization 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.
RE Buffer	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Primer 1	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
SSC Buffer	No known significant effects or critical hazards.

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	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.
Eye contact :	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
	Hybridization 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.
	RE Buffer	No known significant effects or critical hazards.
	Enrichment Control DNA	No known significant effects or critical hazards.
	Primer 1	No known significant effects or critical hazards.
	Primer 2	No known significant effects or critical hazards.
	SSC Buffer	No known significant effects or critical hazards.
	Enzyme Strip 1	No known significant effects or critical hazards.
	Enzyme Strip 2	No known significant effects or critical hazards.
	BSA Solution	No known significant effects or critical hazards.
	Ligation Solution	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation :	HaloPlex Indexing Primer A01 - H06	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Capture Solution	No specific data.
	RE Buffer	No specific data.
	Enrichment Control DNA	No specific data.
	Primer 1	No specific data.
	Primer 2	No specific data.
	SSC Buffer	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	BSA Solution	No specific data.
	Ligation Solution	No specific data.
	DNA Ligase	No specific data.
	HaloPlex Probe, 48 Reactions	No specific data.
Ingestion :	HaloPlex Indexing Primer A01 - H06	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Capture Solution	No specific data.
	RE Buffer	No specific data.
	Enrichment Control DNA	No specific data.
	Primer 1	No specific data.

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	Primer 2	No specific data.
	SSC Buffer	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	BSA Solution	No specific data.
	Ligation Solution	No specific data.
	DNA Ligase	No specific data.
	HaloPlex Probe, 48 Reactions	No specific data.
Skin contact :	HaloPlex Indexing Primer A01 - H06	No specific data.
	Hybridization Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Wash Solution	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	Capture Solution	No specific data.
	RE Buffer	No specific data.
	Enrichment Control DNA	No specific data.
	Primer 1	No specific data.
	Primer 2	No specific data.
	SSC Buffer	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	BSA Solution	No specific data.
	Ligation Solution	No specific data.
	DNA Ligase	No specific data.
	HaloPlex Probe, 48 Reactions	No specific data.
Eye contact :	HaloPlex Indexing Primer A01 - H06	No specific data.
	Hybridization Solution	No specific data.
	Wash Solution	No specific data.
	Capture Solution	No specific data.
	RE Buffer	No specific data.
	Enrichment Control DNA	No specific data.
	Primer 1	No specific data.
	Primer 2	No specific data.
	SSC Buffer	No specific data.
	Enzyme Strip 1	No specific data.
	Enzyme Strip 2	No specific data.
	BSA Solution	No specific data.
	Ligation Solution	No specific data.
	DNA Ligase	No specific data.
	HaloPlex Probe, 48 Reactions	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

SECTION 11: Toxicological information

Potential chronic health effects

General	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization Solution	May cause damage to organs through prolonged or repeated exposure.
		Wash Solution	May cause damage to organs through prolonged or repeated exposure.
		Capture Solution	No known significant effects or critical hazards.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.
Carcinogenicity	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization Solution	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
		Wash Solution	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
		Capture Solution	No known significant effects or critical hazards.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.
Mutagenicity	:	HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
		Hybridization 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.
		RE Buffer	No known significant effects or critical hazards.
		Enrichment Control DNA	No known significant effects or critical hazards.
		Primer 1	No known significant effects or critical hazards.
		Primer 2	No known significant effects or critical hazards.
		SSC Buffer	No known significant effects or critical hazards.
		Enzyme Strip 1	No known significant effects or critical hazards.
		Enzyme Strip 2	No known significant effects or critical hazards.
		BSA Solution	No known significant effects or critical hazards.
		Ligation Solution	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

SECTION 11: Toxicological information

Reproductive toxicity :

HaloPlex Indexing Primer A01 - H06	No known significant effects or critical hazards.
Hybridization Solution	May damage the unborn child.
Wash Solution	May damage the unborn child.
Capture Solution	No known significant effects or critical hazards.
RE Buffer	No known significant effects or critical hazards.
Enrichment Control DNA	No known significant effects or critical hazards.
Primer 1	No known significant effects or critical hazards.
Primer 2	No known significant effects or critical hazards.
SSC Buffer	No known significant effects or critical hazards.
Enzyme Strip 1	No known significant effects or critical hazards.
Enzyme Strip 2	No known significant effects or critical hazards.
BSA Solution	No known significant effects or critical hazards.
Ligation Solution	No known significant effects or critical hazards.
DNA Ligase	No known significant effects or critical hazards.
HaloPlex Probe, 48 Reactions	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Ligation Solution			
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
DNA Ligase			
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Acute EC50 210 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 10800 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
	Acute LC50 8600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 7200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Hybridization Solution formamide	OECD 301A Ready Biodegradability - DOC Die-Away Test	99 % - Readily - 28 days	-	-
Wash Solution formamide	OECD 301A Ready Biodegradability - DOC Die-Away Test	99 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Hybridization Solution formamide	-	-	Readily
Wash Solution formamide	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Hybridization Solution formamide	-0.82	-	low
Wash Solution formamide	-0.82	-	low
Ligation Solution Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	2.7	78.67	low
DNA Ligase Poly(oxy-1,2-ethanediyl), . alpha.-[(1,1,3,3-tetramethylbutyl) phenyl]-.omega.-hydroxy-	2.7	78.67	low

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Ligation Solution — Contains one or more substances considered to have endocrine-disrupting properties.

DNA Ligase — Contains one or more substances considered to have endocrine-disrupting properties.

SECTION 12: Ecological information

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : Dispose of material(s) and residues under controlled conditions. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No.	No.	No.

Additional information

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

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Ligation Solution Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Listed	42	7/3/2017
DNA Ligase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Listed	42	7/3/2017

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Hybridization Solution Formamide	Toxic to reproduction	Candidate	ED/87/2012	6/18/2012
Wash Solution Formamide	Toxic to reproduction	Candidate	ED/87/2012	6/18/2012
Ligation Solution Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Recommended	ED/169/2012	7/3/2017
DNA Ligase Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	Endocrine disrupting properties for environment	Recommended	ED/169/2012	7/3/2017

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Ingredient name	CAS no.	Status
Hybridization Solution Hybridization Solution		30
Wash Solution Wash Solution		30

Label :

HaloPlex Indexing Primer A01 - H06	Not applicable.
Hybridization Solution	Restricted to professional users.
Wash Solution	Restricted to professional users.
Capture Solution	Not applicable.
RE Buffer	Not applicable.
Enrichment Control DNA	Not applicable.
Primer 1	Not applicable.
Primer 2	Not applicable.
SSC Buffer	Not applicable.
Enzyme Strip 1	Not applicable.
Enzyme Strip 2	Not applicable.
BSA Solution	Not applicable.
Ligation Solution	Not applicable.
DNA Ligase	Not applicable.
HaloPlex Probe, 48 Reactions	Not applicable.

SECTION 15: Regulatory information

Other EU regulations

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Hybridization Solution formamide	Ireland Occupational Exposure Limits	formamide	Repro. Repr.1B	-
Wash Solution formamide	Ireland Occupational Exposure Limits	formamide	Repro. Repr.1B	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : Not determined.

SECTION 15: Regulatory information

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Hybridization Solution	
Carc. 2, H351	Calculation method
Repr. 1B, H360D	Calculation method
STOT RE 2, H373	Calculation method
Wash Solution	
Carc. 2, H351	Calculation method
Repr. 1B, H360D	Calculation method
STOT RE 2, H373	Calculation method

Full text of abbreviated H statements

Hybridization Solution	
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
Wash Solution	
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
Ligation Solution	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
DNA Ligase	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

SECTION 16: Other information

Hybridization Solution	
Carc. 2	CARCINOGENICITY - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
Wash Solution	
Carc. 2	CARCINOGENICITY - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
Ligation Solution	
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
DNA Ligase	
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2

Date of issue/ Date of revision : 16/12/2022

Date of previous issue : No previous validation

Version : 1

Notice to reader

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