Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

Agilent OnePGT Library Prep Kit, Part Number G9426AA

Section 1. Identification

1.1 Product identifier

Product name : Agilent OnePGT Library Prep Kit, Part Number G9426AA

Part no. (chemical kit) : G9426AA

Part no. :

Agilent OnePGT Library Prep Kit Box 2	5191-4002
Nuclease-Free Water	5190-9681
Restriction Enzyme 2	5190-9676
Restriction Enzyme Buffer	5190-9677
DNA Ligase	5190-9678
Ligase buffer	5190-9679
PCR Mix	5190-9680
TE	5190-9682
Adapter 1	5190-9669
Adapter 2	5190-9670
Forward PCR primer	5190-9671
Reverse PCR Primer – Index 1 – 96	5190-9674
Reverse NTC PCR Primer	5190-9673
Custom Read 1 Sequencing Primer	5190-9672
Agilent OnePGT Library Prep Kit Box 1	5191-4001
Restriction Enzyme 1	5190-9675
REPLI-g (R) Single Cell Kit	5191-4065
Buffer DLB	1031206
Stop Solution	1032393
RNase-free Water	1112169
PBS, 1x	1112170
REPLI-g DNAPolymerase	1112171
DTT, 1M	1032395
REPLI-g Single Cell Reaction.Buffer	1112172

Validation date : 4/1/2022

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

Material uses : For Research Use Only. Not for use in diagnostic procedures.

Nuclease-Free Water	0.168 ml
Restriction Enzyme 2	0.056 ml
Restriction Enzyme Buffer	0.224 ml
DNA Ligase	0.056 ml
Ligase buffer	0.336 ml
PCR Mix	8 x 0.35 ml
TE	0.778 ml
Adapter 1	0.28 ml
Adapter 2	0.28 ml
Forward PCR primer	0.28 ml
Reverse PCR Primer – Index 1 – 96	0.48 ml
Reverse NTC PCR Primer	0.02 ml
Custom Read 1 Sequencing Primer	0.14 ml
Restriction Enzyme 1	0.056 ml
Buffer DLB	2 tubes (add 0.500 ml H2O to each prior to use)
RNase-free Water	2 x 1.5 ml
REPLI-g DNAPolymerase	2 x 0.055 ml
DTT, 1M	1 x 1.0 ml
REPLI-g Single Cell Reaction.Buffer	3 x 0.7 ml
Stop Solution	1 x 1.8 ml
PBS, 1x	2 x 1.5 ml

Section 1. Identification

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status :

Nuclease-Free Water	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Restriction Enzyme 2	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Restriction Enzyme Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
DNA Ligase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Ligase buffer	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
PCR Mix	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
TE	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Adapter 1	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Adapter 2	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Forward PCR primer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information

Section 2. Hazards identification

	critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Reverse PCR Primer – Index 1 – 96	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Reverse NTC PCR Primer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Custom Read 1 Sequencing Primer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Restriction Enzyme 1	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Buffer DLB	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
RNase-free Water	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
REPLI-g DNAPolymerase	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
DTT, 1M	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
REPLI-g Single Cell Reaction.Buffer	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Stop Solution	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
PBS, 1x	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

Section 2. Hazards identification

Restriction Enzyme 2
H320 EYE IRRITATION - Category 2B

DNA Ligase
H320 EYE IRRITATION - Category 2B

Ligase buffer
H412 AQUATIC HAZARD (LONG-TERM) - Category 3

Restriction Enzyme 1
H320 EYE IRRITATION - Category 2B

Buffer DLB
H290 CORROSIVE TO METALS - Category 1
H301 ACUTE TOXICITY (oral) - Category 3
H314 SKIN CORROSION - Category 1
H318 SERIOUS EYE DAMAGE - Category 1
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H412 AQUATIC HAZARD (LONG-TERM) - Category 3

REPLI-g DNAPolymerase
H320 EYE IRRITATION - Category 2B

DTT, 1M
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Ingredients of unknown toxicity :

Buffer DLB	Percentage of the mixture consisting of ingredient (s) of unknown acute oral toxicity: 10 - 30%
Restriction Enzyme Buffer	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 3.6%
PCR Mix	Percentage of the mixture consisting of ingredient (s) of unknown hazards to the aquatic environment: 1.5%

2.2 GHS label elements

Hazard pictograms : Buffer DLB

DTT, 1M

Signal word :

Nuclease-Free Water	No signal word.
Restriction Enzyme 2	Warning
Restriction Enzyme Buffer	No signal word.
DNA Ligase	Warning
Ligase buffer	No signal word.
PCR Mix	No signal word.
TE	No signal word.
Adapter 1	No signal word.
Adapter 2	No signal word.
Forward PCR primer	No signal word.

Section 2. Hazards identification

	Reverse PCR Primer – Index 1 – 96	No signal word.
	Reverse NTC PCR Primer	No signal word.
	Custom Read 1 Sequencing Primer	No signal word.
	Restriction Enzyme 1	Warning
	Buffer DLB	Danger
	RNase-free Water	No signal word.
	REPLI-g DNAPolymerase	Warning
	DTT, 1M	Warning
	REPLI-g Single Cell Reaction. Buffer	No signal word.
	Stop Solution	No signal word.
	PBS, 1x	No signal word.
Hazard statements :	Nuclease-Free Water	No known significant effects or critical hazards.
	Restriction Enzyme 2	H320 - Causes eye irritation.
	Restriction Enzyme Buffer	No known significant effects or critical hazards.
	DNA Ligase	H320 - Causes eye irritation.
	Ligase buffer	H412 - Harmful to aquatic life with long lasting effects.
	PCR Mix	No known significant effects or critical hazards.
	TE	No known significant effects or critical hazards.
	Adapter 1	No known significant effects or critical hazards.
	Adapter 2	No known significant effects or critical hazards.
	Forward PCR primer	No known significant effects or critical hazards.
	Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	H320 - Causes eye irritation.
	Buffer DLB	H290 - May be corrosive to metals. H301 - Toxic if swallowed. H314 - Causes severe skin burns and eye damage. H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys) H412 - Harmful to aquatic life with long lasting effects.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	H320 - Causes eye irritation.
	DTT, 1M	H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.

Precautionary statements

Prevention :	Nuclease-Free Water	Not applicable.
	Restriction Enzyme 2	Not applicable.
	Restriction Enzyme Buffer	Not applicable.
	DNA Ligase	Not applicable.
	Ligase buffer	P273 - Avoid release to the environment.
	PCR Mix	Not applicable.
	TE	Not applicable.
	Adapter 1	Not applicable.
	Adapter 2	Not applicable.
	Forward PCR primer	Not applicable.
	Reverse PCR Primer – Index 1 – 96	Not applicable.

Section 2. Hazards identification

	Reverse NTC PCR Primer	Not applicable.
	Custom Read 1 Sequencing Primer	Not applicable.
	Restriction Enzyme 1	Not applicable.
	Buffer DLB	P280 - Wear protective gloves, protective clothing and eye or face protection. P234 - Keep only in original packaging. P273 - Avoid release to the environment. P260 - Do not breathe dust. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling.
	RNase-free Water	Not applicable.
	REPLI-g DNAPolymerase	Not applicable.
	DTT, 1M	P280 - Wear protective gloves. Wear eye or face protection. P261 - Avoid breathing vapor. P264 - Wash thoroughly after handling.
	REPLI-g Single Cell Reaction. Buffer	Not applicable.
	Stop Solution	Not applicable.
	PBS, 1x	Not applicable.
Response :	Nuclease-Free Water	Not applicable.
	Restriction Enzyme 2	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	Restriction Enzyme Buffer	Not applicable.
	DNA Ligase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	Ligase buffer	Not applicable.
	PCR Mix	Not applicable.
	TE	Not applicable.
	Adapter 1	Not applicable.
	Adapter 2	Not applicable.
	Forward PCR primer	Not applicable.
	Reverse PCR Primer – Index 1 – 96	Not applicable.
	Reverse NTC PCR Primer	Not applicable.
	Custom Read 1 Sequencing Primer	Not applicable.
	Restriction Enzyme 1	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	Buffer DLB	P390 - Absorb spillage to prevent material damage. P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair):

Section 2. Hazards identification

			Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. P363 - Wash contaminated clothing before reuse. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
		RNase-free Water	Not applicable.
		REPLI-g DNAPolymerase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
		DTT, 1M	P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
		REPLI-g Single Cell Reaction. Buffer	Not applicable.
		Stop Solution	Not applicable.
		PBS, 1x	Not applicable.
Storage	:	Nuclease-Free Water	Not applicable.
		Restriction Enzyme 2	Not applicable.
		Restriction Enzyme Buffer	Not applicable.
		DNA Ligase	Not applicable.
		Ligase buffer	Not applicable.
		PCR Mix	Not applicable.
		TE	Not applicable.
		Adapter 1	Not applicable.
		Adapter 2	Not applicable.
		Forward PCR primer	Not applicable.
		Reverse PCR Primer – Index 1 – 96	Not applicable.
		Reverse NTC PCR Primer	Not applicable.
		Custom Read 1 Sequencing Primer	Not applicable.
		Restriction Enzyme 1	Not applicable.
		Buffer DLB	Not applicable.
		RNase-free Water	Not applicable.
		REPLI-g DNAPolymerase	Not applicable.
		DTT, 1M	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
		REPLI-g Single Cell Reaction. Buffer	Not applicable.
		Stop Solution	Not applicable.
		PBS, 1x	Not applicable.
Disposal	:		

Section 2. Hazards identification

	Nuclease-Free Water	Not applicable.
	Restriction Enzyme 2	Not applicable.
	Restriction Enzyme Buffer	Not applicable.
	DNA Ligase	Not applicable.
	Ligase buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	PCR Mix	Not applicable.
	TE	Not applicable.
	Adapter 1	Not applicable.
	Adapter 2	Not applicable.
	Forward PCR primer	Not applicable.
	Reverse PCR Primer – Index 1 – 96	Not applicable.
	Reverse NTC PCR Primer	Not applicable.
	Custom Read 1 Sequencing Primer	Not applicable.
	Restriction Enzyme 1	Not applicable.
	Buffer DLB	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	RNase-free Water	Not applicable.
	REPLI-g DNAPolymerase	Not applicable.
	DTT, 1M	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	REPLI-g Single Cell Reaction. Buffer	Not applicable.
	Stop Solution	Not applicable.
	PBS, 1x	Not applicable.
Supplemental label elements :	Nuclease-Free Water	None known.
	Restriction Enzyme 2	None known.
	Restriction Enzyme Buffer	None known.
	DNA Ligase	None known.
	Ligase buffer	None known.
	PCR Mix	None known.
	TE	None known.
	Adapter 1	None known.
	Adapter 2	None known.
	Forward PCR primer	None known.
	Reverse PCR Primer – Index 1 – 96	None known.
	Reverse NTC PCR Primer	None known.
	Custom Read 1 Sequencing Primer	None known.
	Restriction Enzyme 1	None known.
	Buffer DLB	Do not taste or swallow. Wash thoroughly after handling.
	RNase-free Water	None known.
	REPLI-g DNAPolymerase	None known.
	DTT, 1M	None known.
	REPLI-g Single Cell Reaction. Buffer	None known.
	Stop Solution	None known.
	PBS, 1x	None known.

2.3 Other hazards

Section 2. Hazards identification

Hazards not otherwise classified :	Nuclease-Free Water	None known.
	Restriction Enzyme 2	None known.
	Restriction Enzyme Buffer	None known.
	DNA Ligase	None known.
	Ligase buffer	None known.
	PCR Mix	None known.
	TE	None known.
	Adapter 1	None known.
	Adapter 2	None known.
	Forward PCR primer	None known.
	Reverse PCR Primer – Index 1 – 96	None known.
	Reverse NTC PCR Primer	None known.
	Custom Read 1 Sequencing Primer	None known.
	Restriction Enzyme 1	None known.
	Buffer DLB	Causes severe digestive tract burns.
	RNase-free Water	None known.
	REPLI-g DNAPolymerase	None known.
	DTT, 1M	None known.
	REPLI-g Single Cell Reaction. Buffer	None known.
	Stop Solution	None known.
	PBS, 1x	None known.

Section 3. Composition/information on ingredients

Substance/mixture :	Nuclease-Free Water	Substance
	Restriction Enzyme 2	Mixture
	Restriction Enzyme Buffer	Mixture
	DNA Ligase	Mixture
	Ligase buffer	Mixture
	PCR Mix	Mixture
	TE	Mixture
	Adapter 1	Mixture
	Adapter 2	Mixture
	Forward PCR primer	Mixture
	Reverse PCR Primer – Index 1 – 96	Mixture
	Reverse NTC PCR Primer	Mixture
	Custom Read 1 Sequencing Primer	Mixture
	Restriction Enzyme 1	Mixture
	Buffer DLB	Mixture
	RNase-free Water	Substance
	REPLI-g DNAPolymerase	Mixture
	DTT, 1M	Mixture
	REPLI-g Single Cell Reaction.Buffer	Mixture
	Stop Solution	Mixture
	PBS, 1x	Mixture

Ingredient name	%	CAS number
Nuclease-Free Water		
water	100	7732-18-5
Restriction Enzyme 2		
Glycerol	≥50 - ≤75	56-81-5
Restriction Enzyme Buffer		
[2-Hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium acetate	≤5	6850-28-8

Section 3. Composition/information on ingredients

DNA Ligase		
Glycerol	≥50 - ≤75	56-81-5
Ligase buffer		
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤3	3483-12-3
Magnesium chloride	<1	7786-30-3
Restriction Enzyme 1		
Glycerol	≥50 - ≤75	56-81-5
Potassium chloride	≤3	7447-40-7
Buffer DLB		
Potassium hydroxide	≥75 - ≤90	1310-58-3
Edetic acid	≥10 - ≤25	60-00-4
RNase-free Water		
water	100	7732-18-5
REPLI-g DNAPolymerase		
Glycerol	≥50 - ≤75	56-81-5
DTT, 1M		
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≥10 - <25	3483-12-3

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

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact :

Nuclease-Free Water	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.
Restriction Enzyme 2	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
Restriction Enzyme 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.
DNA Ligase	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
Ligase buffer	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 if irritation occurs.
PCR Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
TE	Immediately flush eyes with plenty of water,

Section 4. First aid measures

	occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Adapter 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.
Adapter 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.
Forward PCR primer	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.
Reverse PCR Primer – Index 1 – 96	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.
Reverse NTC PCR Primer	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.
Custom Read 1 Sequencing Primer	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.
Restriction Enzyme 1	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
Buffer DLB	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
RNase-free Water	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.
REPLI-g DNAPolymerase	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
DTT, 1M	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.
REPLI-g Single Cell Reaction. Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Stop Solution	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get

Section 4. First aid measures

			medical attention if irritation occurs.
		PBS, 1x	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	:	Nuclease-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Restriction Enzyme 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		Restriction Enzyme Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		DNA Ligase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		Ligase buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		PCR Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		TE	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

Section 4. First aid measures

	attention if symptoms occur.
Adapter 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Adapter 2	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Forward PCR primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Reverse PCR Primer – Index 1 – 96	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Reverse NTC PCR Primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Custom Read 1 Sequencing Primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Restriction Enzyme 1	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Buffer DLB	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.
RNase-free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
REPLI-g DNAPolymerase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are

Section 4. First aid measures

			severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		DTT, 1M	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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.
		REPLI-g Single Cell Reaction. Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		Stop Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		PBS, 1x	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	Nuclease-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Restriction Enzyme 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Restriction Enzyme Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		DNA Ligase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Ligase buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		PCR Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		TE	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Adapter 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Adapter 2	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get

Section 4. First aid measures

		medical attention if symptoms occur.
	Forward PCR primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Reverse PCR Primer – Index 1 – 96	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Reverse NTC PCR Primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Custom Read 1 Sequencing Primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Restriction Enzyme 1	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Buffer DLB	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	RNase-free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	REPLI-g DNAPolymerase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	DTT, 1M	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	REPLI-g Single Cell Reaction. Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Stop Solution	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	PBS, 1x	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion :	Nuclease-Free Water	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.
	Restriction Enzyme 2	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

Section 4. First aid measures

	vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Restriction Enzyme 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.
DNA Ligase	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 if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ligase buffer	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 if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
PCR Mix	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.
TE	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.
Adapter 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

Section 4. First aid measures

	occur.
Adapter 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.
Forward PCR primer	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.
Reverse PCR Primer – Index 1 – 96	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.
Reverse NTC PCR Primer	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.
Custom Read 1 Sequencing Primer	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.
Restriction Enzyme 1	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 if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Buffer DLB	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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.

Section 4. First aid measures

RNase-free Water	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.
REPLI-g DNAPolymerase	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 if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
DTT, 1M	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 if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
REPLI-g Single Cell Reaction. 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.
Stop 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.
PBS, 1x	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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	Causes eye irritation.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	Causes eye irritation.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
		Reverse NTC PCR Primer	No known significant effects or critical hazards.
		Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
		Restriction Enzyme 1	Causes eye irritation.
		Buffer DLB	Causes serious eye damage.
		RNase-free Water	No known significant effects or critical hazards.
		REPLI-g DNAPolymerase	Causes eye irritation.
		DTT, 1M	Causes serious eye irritation.
		REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		PBS, 1x	No known significant effects or critical hazards.
Inhalation	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	No known significant effects or critical hazards.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
		Reverse NTC PCR Primer	No known significant effects or critical hazards.
		Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
		Restriction Enzyme 1	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		RNase-free Water	No known significant effects or critical hazards.
		REPLI-g DNAPolymerase	No known significant effects or critical hazards.
		DTT, 1M	May cause respiratory irritation.
		REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		PBS, 1x	No known significant effects or critical hazards.
Skin contact	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	No known significant effects or critical hazards.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.

Section 4. First aid measures

	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	No known significant effects or critical hazards.
	Buffer DLB	Causes severe burns.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	No known significant effects or critical hazards.
	DTT, 1M	Causes skin irritation.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.
Ingestion :	Nuclease-Free Water	No known significant effects or critical hazards.
	Restriction Enzyme 2	No known significant effects or critical hazards.
	Restriction Enzyme Buffer	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligase buffer	No known significant effects or critical hazards.
	PCR Mix	No known significant effects or critical hazards.
	TE	No known significant effects or critical hazards.
	Adapter 1	No known significant effects or critical hazards.
	Adapter 2	No known significant effects or critical hazards.
	Forward PCR primer	No known significant effects or critical hazards.
	Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	No known significant effects or critical hazards.
	Buffer DLB	Toxic if swallowed. Severely corrosive to the digestive tract. Causes severe burns.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	No known significant effects or critical hazards.
	DTT, 1M	No known significant effects or critical hazards.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Nuclease-Free Water	No specific data.
	Restriction Enzyme 2	Adverse symptoms may include the following: irritation watering redness
	Restriction Enzyme Buffer	No specific data.
	DNA Ligase	Adverse symptoms may include the following: irritation watering redness
	Ligase buffer	No specific data.
	PCR Mix	No specific data.
	TE	No specific data.
	Adapter 1	No specific data.
	Adapter 2	No specific data.
	Forward PCR primer	No specific data.
	Reverse PCR Primer – Index 1 – 96	No specific data.
	Reverse NTC PCR Primer	No specific data.
	Custom Read 1 Sequencing Primer	No specific data.
	Restriction Enzyme 1	Adverse symptoms may include the following:

Section 4. First aid measures

			irritation watering redness
		Buffer DLB	Adverse symptoms may include the following: pain watering redness
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	Adverse symptoms may include the following: irritation watering redness
		DTT, 1M	Adverse symptoms may include the following: pain or irritation watering redness
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.
Inhalation	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	No specific data.
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	No specific data.
		Ligase buffer	No specific data.
		PCR Mix	No specific data.
		TE	No specific data.
		Adapter 1	No specific data.
		Adapter 2	No specific data.
		Forward PCR primer	No specific data.
		Reverse PCR Primer – Index 1 – 96	No specific data.
		Reverse NTC PCR Primer	No specific data.
		Custom Read 1 Sequencing Primer	No specific data.
		Restriction Enzyme 1	No specific data.
		Buffer DLB	No specific data.
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	No specific data.
		DTT, 1M	Adverse symptoms may include the following: respiratory tract irritation coughing
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.
Skin contact	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	No specific data.
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	No specific data.
		Ligase buffer	No specific data.
		PCR Mix	No specific data.
		TE	No specific data.
		Adapter 1	No specific data.
		Adapter 2	No specific data.
		Forward PCR primer	No specific data.
		Reverse PCR Primer – Index 1 – 96	No specific data.
		Reverse NTC PCR Primer	No specific data.
		Custom Read 1 Sequencing	No specific data.

Section 4. First aid measures

		Primer	
		Restriction Enzyme 1	No specific data.
		Buffer DLB	Adverse symptoms may include the following: pain or irritation redness blistering may occur
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	No specific data.
		DTT, 1M	Adverse symptoms may include the following: irritation redness
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.
Ingestion	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	No specific data.
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	No specific data.
		Ligase buffer	No specific data.
		PCR Mix	No specific data.
		TE	No specific data.
		Adapter 1	No specific data.
		Adapter 2	No specific data.
		Forward PCR primer	No specific data.
		Reverse PCR Primer – Index 1 – 96	No specific data.
		Reverse NTC PCR Primer	No specific data.
		Custom Read 1 Sequencing Primer	No specific data.
		Restriction Enzyme 1	No specific data.
		Buffer DLB	Adverse symptoms may include the following: stomach pains
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	No specific data.
		DTT, 1M	No specific data.
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.

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

Notes to physician	:	Nuclease-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Restriction Enzyme 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Restriction Enzyme Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		DNA Ligase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Ligase buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

	PCR Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	TE	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Adapter 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Adapter 2	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Forward PCR primer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reverse PCR Primer – Index 1 – 96	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reverse NTC PCR Primer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Custom Read 1 Sequencing Primer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Restriction Enzyme 1	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Buffer DLB	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.
	RNase-free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	REPLI-g DNAPolymerase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	DTT, 1M	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	REPLI-g Single Cell Reaction. Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Stop Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	PBS, 1x	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	Nuclease-Free Water	No specific treatment.
	Restriction Enzyme 2	No specific treatment.
	Restriction Enzyme Buffer	No specific treatment.
	DNA Ligase	No specific treatment.
	Ligase buffer	No specific treatment.
	PCR Mix	No specific treatment.
	TE	No specific treatment.
	Adapter 1	No specific treatment.
	Adapter 2	No specific treatment.
	Forward PCR primer	No specific treatment.
	Reverse PCR Primer – Index 1 –	No specific treatment.

Section 4. First aid measures

	96	
	Reverse NTC PCR Primer	No specific treatment.
	Custom Read 1 Sequencing Primer	No specific treatment.
	Restriction Enzyme 1	No specific treatment.
	Buffer DLB	No specific treatment.
	RNase-free Water	No specific treatment.
	REPLI-g DNAPolymerase	No specific treatment.
	DTT, 1M	No specific treatment.
	REPLI-g Single Cell Reaction. Buffer	No specific treatment.
	Stop Solution	No specific treatment.
	PBS, 1x	No specific treatment.
Protection of first-aiders :	Nuclease-Free Water	No action shall be taken involving any personal risk or without suitable training.
	Restriction Enzyme 2	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Restriction Enzyme Buffer	No action shall be taken involving any personal risk or without suitable training.
	DNA Ligase	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Ligase buffer	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	PCR Mix	No action shall be taken involving any personal risk or without suitable training.
	TE	No action shall be taken involving any personal risk or without suitable training.
	Adapter 1	No action shall be taken involving any personal risk or without suitable training.
	Adapter 2	No action shall be taken involving any personal risk or without suitable training.
	Forward PCR primer	No action shall be taken involving any personal risk or without suitable training.
	Reverse PCR Primer – Index 1 – 96	No action shall be taken involving any personal risk or without suitable training.
	Reverse NTC PCR Primer	No action shall be taken involving any personal risk or without suitable training.
	Custom Read 1 Sequencing Primer	No action shall be taken involving any personal risk or without suitable training.
	Restriction Enzyme 1	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Buffer DLB	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.
	RNase-free Water	No action shall be taken involving any personal risk or without suitable training.
	REPLI-g DNAPolymerase	No action shall be taken involving any personal risk

Section 4. First aid measures

	or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
DTT, 1M	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.
REPLI-g Single Cell Reaction. Buffer	No action shall be taken involving any personal risk or without suitable training.
Stop Solution	No action shall be taken involving any personal risk or without suitable training.
PBS, 1x	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media :

Nuclease-Free Water	Use an extinguishing agent suitable for the surrounding fire.
Restriction Enzyme 2	Use an extinguishing agent suitable for the surrounding fire.
Restriction Enzyme Buffer	Use an extinguishing agent suitable for the surrounding fire.
DNA Ligase	Use an extinguishing agent suitable for the surrounding fire.
Ligase buffer	Use an extinguishing agent suitable for the surrounding fire.
PCR Mix	Use an extinguishing agent suitable for the surrounding fire.
TE	Use an extinguishing agent suitable for the surrounding fire.
Adapter 1	Use an extinguishing agent suitable for the surrounding fire.
Adapter 2	Use an extinguishing agent suitable for the surrounding fire.
Forward PCR primer	Use an extinguishing agent suitable for the surrounding fire.
Reverse PCR Primer – Index 1 – 96	Use an extinguishing agent suitable for the surrounding fire.
Reverse NTC PCR Primer	Use an extinguishing agent suitable for the surrounding fire.
Custom Read 1 Sequencing Primer	Use an extinguishing agent suitable for the surrounding fire.
Restriction Enzyme 1	Use an extinguishing agent suitable for the surrounding fire.
Buffer DLB	Use an extinguishing agent suitable for the surrounding fire.
RNase-free Water	Use an extinguishing agent suitable for the surrounding fire.
REPLI-g DNAPolymerase	Use an extinguishing agent suitable for the surrounding fire.
DTT, 1M	Use an extinguishing agent suitable for the surrounding fire.
REPLI-g Single Cell Reaction. Buffer	Use an extinguishing agent suitable for the surrounding fire.
Stop Solution	Use an extinguishing agent suitable for the

Section 5. Fire-fighting measures

		surrounding fire.
	PBS, 1x	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media :	Nuclease-Free Water	None known.
	Restriction Enzyme 2	None known.
	Restriction Enzyme Buffer	None known.
	DNA Ligase	None known.
	Ligase buffer	None known.
	PCR Mix	None known.
	TE	None known.
	Adapter 1	None known.
	Adapter 2	None known.
	Forward PCR primer	None known.
	Reverse PCR Primer – Index 1 – 96	None known.
	Reverse NTC PCR Primer	None known.
	Custom Read 1 Sequencing Primer	None known.
	Restriction Enzyme 1	None known.
	Buffer DLB	None known.
	RNase-free Water	None known.
	REPLI-g DNAPolymerase	None known.
	DTT, 1M	None known.
	REPLI-g Single Cell Reaction. Buffer	None known.
	Stop Solution	None known.
	PBS, 1x	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical :	Nuclease-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	Restriction Enzyme 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	Restriction Enzyme Buffer	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.
	Ligase buffer	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	PCR Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	TE	In a fire or if heated, a pressure increase will occur and the container may burst.
	Adapter 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	Adapter 2	In a fire or if heated, a pressure increase will occur and the container may burst.
	Forward PCR primer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Reverse PCR Primer – Index 1 – 96	In a fire or if heated, a pressure increase will occur and the container may burst.
	Reverse NTC PCR Primer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Custom Read 1 Sequencing Primer	In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

	Restriction Enzyme 1	In a fire or if heated, a pressure increase will occur and the container may burst.
	Buffer DLB	This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
	RNase-free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	REPLI-g DNAPolymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	DTT, 1M	In a fire or if heated, a pressure increase will occur and the container may burst.
	REPLI-g Single Cell Reaction. Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Stop Solution	In a fire or if heated, a pressure increase will occur and the container may burst.
	PBS, 1x	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products :	Nuclease-Free Water	No specific data.
	Restriction Enzyme 2	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Restriction Enzyme Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides
	DNA Ligase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Ligase buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds
	PCR Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	TE	No specific data.
	Adapter 1	No specific data.
	Adapter 2	No specific data.
	Forward PCR primer	No specific data.
	Reverse PCR Primer – Index 1 – 96	No specific data.
	Reverse NTC PCR Primer	No specific data.
	Custom Read 1 Sequencing Primer	No specific data.
	Restriction Enzyme 1	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	Buffer DLB	Decomposition products may include the following

Section 5. Fire-fighting measures

		materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides
	RNase-free Water	No specific data.
	REPLI-g DNAPolymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	DTT, 1M	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
	REPLI-g Single Cell Reaction. Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Stop Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	PBS, 1x	Decomposition products may include the following materials: carbon dioxide carbon monoxide phosphorus oxides metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	:	Nuclease-Free Water	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.
		Restriction Enzyme 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.
		Restriction Enzyme 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.
		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.
		Ligase 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.
		PCR Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
		TE	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.

Section 5. Fire-fighting measures

Adapter 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.
Adapter 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.
Forward PCR primer	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.
Reverse PCR Primer – Index 1 – 96	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.
Reverse NTC PCR Primer	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.
Custom Read 1 Sequencing Primer	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.
Restriction Enzyme 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.
Buffer DLB	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.
RNase-free Water	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.
REPLI-g DNAPolymerase	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.
DTT, 1M	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.
REPLI-g Single Cell Reaction. Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Stop Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
PBS, 1x	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.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters	:	Nuclease-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Restriction Enzyme 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Restriction Enzyme Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		DNA Ligase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Ligase buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		PCR Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		TE	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Adapter 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Adapter 2	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Forward PCR primer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Reverse PCR Primer – Index 1 – 96	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Reverse NTC PCR Primer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Custom Read 1 Sequencing Primer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Restriction Enzyme 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Buffer DLB	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 5. Fire-fighting measures

RNase-free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
REPLI-g DNAPolymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
DTT, 1M	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
REPLI-g Single Cell Reaction. Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Stop Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
PBS, 1x	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :

Nuclease-Free Water	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Restriction Enzyme 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Restriction Enzyme Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
DNA Ligase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Ligase buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate

Section 6. Accidental release measures

	surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
PCR Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
TE	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Adapter 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Adapter 2	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Forward PCR primer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Reverse PCR Primer – Index 1 – 96	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Reverse NTC PCR Primer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Custom Read 1 Sequencing Primer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Restriction Enzyme 1	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid

Section 6. Accidental release measures

	breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Buffer DLB	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
RNase-free Water	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
REPLI-g DNAPolymerase	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
DTT, 1M	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
REPLI-g Single Cell Reaction. Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Stop Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
PBS, 1x	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders :	Nuclease-Free Water	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Restriction Enzyme 2	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Restriction Enzyme Buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	DNA Ligase	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Ligase buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	PCR Mix	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	TE	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Adapter 1	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Adapter 2	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Forward PCR primer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Reverse PCR Primer – Index 1 – 96	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Reverse NTC PCR Primer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Custom Read 1 Sequencing Primer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Restriction Enzyme 1	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Buffer DLB	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

	RNase-free Water	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	REPLI-g DNAPolymerase	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	DTT, 1M	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	REPLI-g Single Cell Reaction. Buffer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Stop Solution	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	PBS, 1x	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions :	Nuclease-Free Water	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Restriction Enzyme 2	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Restriction Enzyme Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	DNA Ligase	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Ligase buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
	PCR Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	TE	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has

Section 6. Accidental release measures

	caused environmental pollution (sewers, waterways, soil or air).
Adapter 1	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Adapter 2	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Forward PCR primer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Reverse PCR Primer – Index 1 – 96	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Reverse NTC PCR Primer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Custom Read 1 Sequencing Primer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Restriction Enzyme 1	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Buffer DLB	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.
RNase-free Water	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
REPLI-g DNAPolymerase	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
DTT, 1M	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
REPLI-g Single Cell Reaction.	Avoid dispersal of spilled material and runoff and

Section 6. Accidental release measures

Buffer	contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Stop Solution	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
PBS, 1x	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up :	Nuclease-Free Water	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.
	Restriction Enzyme 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.
	Restriction Enzyme 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.
	DNA Ligase	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	Ligase 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.
	PCR Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	TE	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.
	Adapter 1	Stop leak if without risk. Move containers from spill

Section 6. Accidental release measures

	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.
Adapter 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.
Forward PCR primer	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.
Reverse PCR Primer – Index 1 – 96	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.
Reverse NTC PCR Primer	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.
Custom Read 1 Sequencing Primer	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.
Restriction Enzyme 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.
Buffer DLB	Move containers from spill area. Absorb spillage to prevent material damage. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
RNase-free Water	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.
REPLI-g DNAPolymerase	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

DTT, 1M	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.
REPLI-g Single Cell Reaction. Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Stop Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
PBS, 1x	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures :

Nuclease-Free Water	Put on appropriate personal protective equipment (see Section 8).
Restriction Enzyme 2	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Restriction Enzyme Buffer	Put on appropriate personal protective equipment (see Section 8).
DNA Ligase	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Ligase buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. 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.
PCR Mix	Put on appropriate personal protective equipment (see Section 8).
TE	Put on appropriate personal protective equipment

Section 7. Handling and storage

	(see Section 8).
Adapter 1	Put on appropriate personal protective equipment (see Section 8).
Adapter 2	Put on appropriate personal protective equipment (see Section 8).
Forward PCR primer	Put on appropriate personal protective equipment (see Section 8).
Reverse PCR Primer – Index 1 – 96	Put on appropriate personal protective equipment (see Section 8).
Reverse NTC PCR Primer	Put on appropriate personal protective equipment (see Section 8).
Custom Read 1 Sequencing Primer	Put on appropriate personal protective equipment (see Section 8).
Restriction Enzyme 1	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Buffer DLB	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. 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. Absorb spillage to prevent material damage.
RNase-free Water	Put on appropriate personal protective equipment (see Section 8).
REPLI-g DNAPolymerase	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
DTT, 1M	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.
REPLI-g Single Cell Reaction. Buffer	Put on appropriate personal protective equipment (see Section 8).
Stop Solution	Put on appropriate personal protective equipment (see Section 8).
PBS, 1x	Put on appropriate personal protective equipment (see Section 8).

Section 7. Handling and storage

Advice on general occupational hygiene :	Nuclease-Free Water	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.
	Restriction Enzyme 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.
	Restriction Enzyme 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.
	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.
	Ligase 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.
	PCR Mix	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	TE	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.
	Adapter 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.
	Adapter 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

Section 7. Handling and storage

	contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Forward PCR primer	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.
Reverse PCR Primer – Index 1 – 96	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.
Reverse NTC PCR Primer	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.
Custom Read 1 Sequencing Primer	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.
Restriction Enzyme 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.
Buffer DLB	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.
RNase-free Water	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.
REPLI-g DNAPolymerase	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.
DTT, 1M	Eating, drinking and smoking should be prohibited

Section 7. Handling and storage

		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.
	REPLI-g Single Cell Reaction. Buffer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Stop Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	PBS, 1x	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	: Nuclease-Free Water	Storage temperature: -20°C (-4°F). Store in accordance with local regulations. Shelf life: 12 months. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Restriction Enzyme 2	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Restriction Enzyme Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled

Section 7. Handling and storage

	containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
DNA Ligase	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Ligase buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
PCR Mix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
TE	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Adapter 1	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Adapter 2	Store in accordance with local regulations. Store in original container protected from direct sunlight in a

Section 7. Handling and storage

	dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Forward PCR primer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Reverse PCR Primer – Index 1 – 96	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Reverse NTC PCR Primer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Custom Read 1 Sequencing Primer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Restriction Enzyme 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

Section 7. Handling and storage

	to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Buffer DLB	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 in a corrosion resistant container with a resistant inner liner. Store locked up. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
RNase-free Water	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
REPLI-g DNAPolymerase	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
DTT, 1M	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
REPLI-g Single Cell Reaction. Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled

Section 7. Handling and storage

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

7.3 Specific end use(s)

Recommendations	:	Nuclease-Free Water	Industrial applications, Professional applications.
		Restriction Enzyme 2	Industrial applications, Professional applications.
		Restriction Enzyme Buffer	Industrial applications, Professional applications.
		DNA Ligase	Industrial applications, Professional applications.
		Ligase buffer	Industrial applications, Professional applications.
		PCR Mix	Industrial applications, Professional applications.
		TE	Industrial applications, Professional applications.
		Adapter 1	Industrial applications, Professional applications.
		Adapter 2	Industrial applications, Professional applications.
		Forward PCR primer	Industrial applications, Professional applications.
		Reverse PCR Primer – Index 1 – 96	Industrial applications, Professional applications.
		Reverse NTC PCR Primer	Industrial applications, Professional applications.
		Custom Read 1 Sequencing Primer	Industrial applications, Professional applications.
		Restriction Enzyme 1	Industrial applications, Professional applications.
		Buffer DLB	Industrial applications, Professional applications.
		RNase-free Water	Industrial applications, Professional applications.
		REPLI-g DNAPolymerase	Industrial applications, Professional applications.
		DTT, 1M	Industrial applications, Professional applications.
		REPLI-g Single Cell Reaction. Buffer	Industrial applications, Professional applications.
		Stop Solution	Industrial applications, Professional applications.
		PBS, 1x	Industrial applications, Professional applications.
Industrial sector specific solutions	:	Nuclease-Free Water	Not available.
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Not available.
		Ligase buffer	Not available.
		PCR Mix	Not available.
		TE	Not available.

Section 7. Handling and storage

Adapter 1	Not available.
Adapter 2	Not available.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.
Reverse NTC PCR Primer	Not available.
Custom Read 1 Sequencing Primer	Not available.
Restriction Enzyme 1	Not available.
Buffer DLB	Not available.
RNase-free Water	Not available.
REPLI-g DNAPolymerase	Not available.
DTT, 1M	Not available.
REPLI-g Single Cell Reaction. Buffer	Not available.
Stop Solution	Not available.
PBS, 1x	Not available.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Nuclease-Free Water	
water	None.
Restriction Enzyme 2	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Restriction Enzyme Buffer	
[2-Hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium acetate	None.
DNA Ligase	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Ligase buffer	
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	None.
Magnesium chloride	None.
Restriction Enzyme 1	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust

Section 8. Exposure controls/personal protection

	OSHA PEL (United States, 5/2018). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Potassium chloride	None.
Buffer DLB	
Potassium hydroxide	**ACGIH TLV (United States, 1/2021).** C: 2 mg/m³ **OSHA PEL 1989 (United States, 3/1989).** CEIL: 2 mg/m³ **NIOSH REL (United States, 10/2020).** CEIL: 2 mg/m³
Edetic acid	None.
RNase-free Water	
water	None.
REPLI-g DNAPolymerase	
Glycerol	**OSHA PEL 1989 (United States, 3/1989).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL (United States, 5/2018).** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
DTT, 1M	
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	None.

8.2 Exposure controls

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

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

Individual protection measures

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

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

Skin protection

Section 8. Exposure controls/personal protection

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

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

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

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state :

Nuclease-Free Water	Liquid.
Restriction Enzyme 2	Liquid.
Restriction Enzyme Buffer	Liquid.
DNA Ligase	Liquid.
Ligase buffer	Liquid.
PCR Mix	Liquid.
TE	Liquid.
Adapter 1	Liquid.
Adapter 2	Liquid.
Forward PCR primer	Liquid.
Reverse PCR Primer – Index 1 – 96	Liquid.
Reverse NTC PCR Primer	Liquid.
Custom Read 1 Sequencing Primer	Liquid.
Restriction Enzyme 1	Liquid.
Buffer DLB	Solid. [lyophilised]
RNase-free Water	Liquid.
REPLI-g DNAPolymerase	Liquid.
DTT, 1M	Liquid. [Fluid.]
REPLI-g Single Cell Reaction. Buffer	Liquid.
Stop Solution	Liquid.
PBS, 1x	Liquid.

Color :

Nuclease-Free Water	Colorless.
Restriction Enzyme 2	Not available.
Restriction Enzyme Buffer	Not available.
DNA Ligase	Colorless.
Ligase buffer	Colorless.
PCR Mix	Colorless.
TE	Not available.
Adapter 1	Colorless.
Adapter 2	Colorless.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.

Section 9. Physical and chemical properties and safety characteristics

		Reverse NTC PCR Primer	Not available.
		Custom Read 1 Sequencing Primer	Not available.
		Restriction Enzyme 1	Not available.
		Buffer DLB	White.
		RNase-free Water	Colorless.
		REPLI-g DNAPolymerase	Beige. [Light]
		DTT, 1M	Clear.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.
Odor	:	Nuclease-Free Water	Odorless.
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Mild.
		Ligase buffer	Mild.
		PCR Mix	Mild.
		TE	Not available.
		Adapter 1	Mild.
		Adapter 2	Mild.
		Forward PCR primer	Not available.
		Reverse PCR Primer – Index 1 – 96	Not available.
		Reverse NTC PCR Primer	Not available.
		Custom Read 1 Sequencing Primer	Not available.
		Restriction Enzyme 1	Not available.
		Buffer DLB	Characteristic.
		RNase-free Water	Odorless.
		REPLI-g DNAPolymerase	Odorless.
		DTT, 1M	Characteristic.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Characteristic.
		PBS, 1x	Characteristic.
Odor threshold	:	Nuclease-Free Water	Not available.
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Not available.
		Ligase buffer	Not available.
		PCR Mix	Not available.
		TE	Not available.
		Adapter 1	Not available.
		Adapter 2	Not available.
		Forward PCR primer	Not available.
		Reverse PCR Primer – Index 1 – 96	Not available.
		Reverse NTC PCR Primer	Not available.
		Custom Read 1 Sequencing Primer	Not available.
		Restriction Enzyme 1	Not available.
		Buffer DLB	Not available.
		RNase-free Water	Not available.
		REPLI-g DNAPolymerase	Not available.
		DTT, 1M	Not available.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.

Section 9. Physical and chemical properties and safety characteristics

		PBS, 1x	Not available.
pH	:	Nuclease-Free Water	7
		Restriction Enzyme 2	7.4
		Restriction Enzyme Buffer	7.9
		DNA Ligase	7.4
		Ligase buffer	7.5
		PCR Mix	Not available.
		TE	8
		Adapter 1	7.5
		Adapter 2	Not available.
		Forward PCR primer	8
		Reverse PCR Primer – Index 1 – 96	8
		Reverse NTC PCR Primer	8
		Custom Read 1 Sequencing Primer	8
		Restriction Enzyme 1	7.5
		Buffer DLB	14
		RNase-free Water	6 to 8
		REPLI-g DNAPolymerase	Not available.
		DTT, 1M	Not available.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.
Melting point/freezing point	:	Nuclease-Free Water	0°C (32°F)
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Not available.
		Ligase buffer	Not available.
		PCR Mix	Not available.
		TE	0°C (32°F)
		Adapter 1	0°C (32°F)
		Adapter 2	0°C (32°F)
		Forward PCR primer	0°C (32°F)
		Reverse PCR Primer – Index 1 – 96	0°C (32°F)
		Reverse NTC PCR Primer	0°C (32°F)
		Custom Read 1 Sequencing Primer	0°C (32°F)
		Restriction Enzyme 1	Not available.
		Buffer DLB	Not available.
		RNase-free Water	0°C (32°F)
		REPLI-g DNAPolymerase	Not available.
		DTT, 1M	Not available.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.
Boiling point, initial boiling point, and boiling range	:	Nuclease-Free Water	100°C (212°F)
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Not available.
		Ligase buffer	Not available.
		PCR Mix	100°C (212°F)
		TE	100°C (212°F)
		Adapter 1	100°C (212°F)
		Adapter 2	100°C (212°F)
		Forward PCR primer	100°C (212°F)

Section 9. Physical and chemical properties and safety characteristics

Reverse PCR Primer – Index 1 – 96	100°C (212°F)
Reverse NTC PCR Primer	100°C (212°F)
Custom Read 1 Sequencing Primer	100°C (212°F)
Restriction Enzyme 1	Not available.
Buffer DLB	Not available.
RNase-free Water	100°C (212°F)
REPLI-g DNAPolymerase	Not available.
DTT, 1M	Not available.
REPLI-g Single Cell Reaction. Buffer	Not available.
Stop Solution	Not available.
PBS, 1x	Not available.

Flash point :

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
Restriction Enzyme 2						
Edetic acid	>100	>212	DIN 51758			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				
DNA Ligase						
Edetic acid	>100	>212	DIN 51758			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				
Ligase buffer						
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				
TE						
Edetic acid	>100	>212	DIN 51758			
Forward PCR primer						
Edetic acid	>100	>212	DIN 51758			
Reverse PCR Primer – Index 1 – 96						
Edetic acid	>100	>212	DIN 51758			
Reverse NTC PCR Primer						
Edetic acid	>100	>212	DIN 51758			
Custom Read 1 Sequencing Primer						
Edetic acid	>100	>212	DIN 51758			
Restriction Enzyme 1						

Section 9. Physical and chemical properties and safety characteristics

Edetic acid	>100	>212	DIN 51758			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				
REPLI-g DNAPolymerase						
Glycerol				177	350.6	
DTT, 1M						
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230				

Evaporation rate :

Nuclease-Free Water	Not available.
Restriction Enzyme 2	Not available.
Restriction Enzyme Buffer	Not available.
DNA Ligase	Not available.
Ligase buffer	Not available.
PCR Mix	Not available.
TE	Not available.
Adapter 1	Not available.
Adapter 2	Not available.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.
Reverse NTC PCR Primer	Not available.
Custom Read 1 Sequencing Primer	Not available.
Restriction Enzyme 1	Not available.
Buffer DLB	Not available.
RNase-free Water	Not available.
REPLI-g DNAPolymerase	Not available.
DTT, 1M	Not available.
REPLI-g Single Cell Reaction. Buffer	Not available.
Stop Solution	Not available.
PBS, 1x	Not available.

Flammability :

Nuclease-Free Water	Not applicable.
Restriction Enzyme 2	Not applicable.
Restriction Enzyme Buffer	Not applicable.
DNA Ligase	Not applicable.
Ligase buffer	Not applicable.
PCR Mix	Not applicable.
TE	Not applicable.
Adapter 1	Not applicable.
Adapter 2	Not applicable.
Forward PCR primer	Not applicable.
Reverse PCR Primer – Index 1 – 96	Not applicable.
Reverse NTC PCR Primer	Not applicable.
Custom Read 1 Sequencing Primer	Not applicable.
Restriction Enzyme 1	Not applicable.
Buffer DLB	Not available.
RNase-free Water	Not applicable.
REPLI-g DNAPolymerase	Not applicable.
DTT, 1M	Not applicable.
REPLI-g Single Cell Reaction.	Not applicable.

Section 9. Physical and chemical properties and safety characteristics

		Buffer	
		Stop Solution	Not applicable.
		PBS, 1x	Not applicable.
Lower and upper explosion limit/flammability limit	:	Nuclease-Free Water	Not available.
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Not available.
		Ligase buffer	Not available.
		PCR Mix	Not available.
		TE	Not available.
		Adapter 1	Not available.
		Adapter 2	Not available.
		Forward PCR primer	Not available.
		Reverse PCR Primer – Index 1 – 96	Not available.
		Reverse NTC PCR Primer	Not available.
		Custom Read 1 Sequencing Primer	Not available.
		Restriction Enzyme 1	Not available.
		Buffer DLB	Not applicable.
		RNase-free Water	Not available.
		REPLI-g DNAPolymerase	Not available.
		DTT, 1M	Not available.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.
Vapor pressure	:	Nuclease-Free Water	3.2 kPa (23.8 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C (122°F)]
		Restriction Enzyme 2	Not available.
		Restriction Enzyme Buffer	Not available.
		DNA Ligase	Not available.
		Ligase buffer	Not available.
		PCR Mix	Not available.
		TE	Not available.
		Adapter 1	Not available.
		Adapter 2	Not available.
		Forward PCR primer	Not available.
		Reverse PCR Primer – Index 1 – 96	Not available.
		Reverse NTC PCR Primer	Not available.
		Custom Read 1 Sequencing Primer	Not available.
		Restriction Enzyme 1	Not available.
		Buffer DLB	Not available.
		RNase-free Water	2.3 kPa (17.25 mm Hg)
		REPLI-g DNAPolymerase	Not available.
		DTT, 1M	Not available.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Restriction Enzyme 2						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
Restriction Enzyme Buffer						
water	23.8	3.2		92.258	12.3	
potassium acetate	0.000000013	0.0000000017				
DNA Ligase						
Glycerol	0.000075	0.00001		0.0025	0.00033	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
Ligase buffer						
water	23.8	3.2		92.258	12.3	
Adenosine 5'-(tetrahydrogen triphosphate), disodium salt	<0.00075006	<0.0001		<0.00075006	<0.0001	
TE						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
Adapter 1						
water	23.8	3.2		92.258	12.3	
potassium acetate	0.000000013	0.0000000017				
Adapter 2						
water	23.8	3.2		92.258	12.3	
potassium acetate	0.000000013	0.0000000017				
Forward PCR primer						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
Reverse PCR Primer – Index 1 – 96						
water	23.8	3.2		92.258	12.3	
2-Amino-2-	0.000027	0.0000036		0.000007501	0.000001	

Section 9. Physical and chemical properties and safety characteristics

(hydroxymethyl)propane-1,3-diol hydrochloride						
Reverse NTC PCR Primer						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
Custom Read 1 Sequencing Primer						
water	23.8	3.2		92.258	12.3	
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	0.000027	0.0000036		0.000007501	0.000001	
Restriction Enzyme 1						
water	23.8	3.2		92.258	12.3	
Glycerol	0.000075	0.00001		0.0025	0.00033	
REPLI-g DNAPolymerase						
Glycerol	0.000075	0.00001		0.0025	0.00033	

Relative vapor density : Nuclease-Free Water 0.62 [Air = 1]
Restriction Enzyme 2 Not available.
Restriction Enzyme Buffer Not available.
DNA Ligase Not available.
Ligase buffer Not available.
PCR Mix Not available.
TE Not available.
Adapter 1 Not available.
Adapter 2 Not available.
Forward PCR primer Not available.
Reverse PCR Primer – Index 1 – 96 Not available.
Reverse NTC PCR Primer Not available.
Custom Read 1 Sequencing Primer Not available.
Restriction Enzyme 1 Not available.
Buffer DLB Not applicable.
RNase-free Water Not available.
REPLI-g DNAPolymerase Not available.
DTT, 1M Not available.
REPLI-g Single Cell Reaction. Buffer Not available.
Stop Solution Not available.
PBS, 1x Not available.

Relative density : Nuclease-Free Water 1
Restriction Enzyme 2 Not available.
Restriction Enzyme Buffer Not available.
DNA Ligase Not available.
Ligase buffer Not available.
PCR Mix Not available.
TE Not available.
Adapter 1 Not available.

Section 9. Physical and chemical properties and safety characteristics

		Adapter 2	Not available.
		Forward PCR primer	Not available.
		Reverse PCR Primer – Index 1 – 96	Not available.
		Reverse NTC PCR Primer	Not available.
		Custom Read 1 Sequencing Primer	Not available.
		Restriction Enzyme 1	Not available.
		Buffer DLB	Not available.
		RNase-free Water	1
		REPLI-g DNAPolymerase	Not available.
		DTT, 1M	Not available.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.
Solubility	:	Nuclease-Free Water	Easily soluble in the following materials: cold water and hot water.
		Restriction Enzyme 2	Easily soluble in the following materials: cold water and hot water.
		Restriction Enzyme Buffer	Easily soluble in the following materials: cold water and hot water.
		DNA Ligase	Easily soluble in the following materials: cold water and hot water.
		Ligase buffer	Easily soluble in the following materials: cold water and hot water.
		PCR Mix	Not available.
		TE	Easily soluble in the following materials: cold water and hot water.
		Adapter 1	Soluble in the following materials: cold water and hot water.
		Adapter 2	Soluble in the following materials: cold water and hot water.
		Forward PCR primer	Easily soluble in the following materials: cold water and hot water.
		Reverse PCR Primer – Index 1 – 96	Easily soluble in the following materials: cold water and hot water.
		Reverse NTC PCR Primer	Easily soluble in the following materials: cold water and hot water.
		Custom Read 1 Sequencing Primer	Easily soluble in the following materials: cold water and hot water.
		Restriction Enzyme 1	Soluble in the following materials: cold water and hot water.
		Buffer DLB	Easily soluble in the following materials: cold water and hot water.
		RNase-free Water	Easily soluble in the following materials: cold water and hot water.
		REPLI-g DNAPolymerase	Soluble in the following materials: cold water and hot water.
		DTT, 1M	Easily soluble in the following materials: cold water and hot water.
		REPLI-g Single Cell Reaction. Buffer	Not available.
		Stop Solution	Not available.
		PBS, 1x	Not available.

Section 9. Physical and chemical properties and safety characteristics

Partition coefficient: n-octanol/water :

Nuclease-Free Water	-1.38
Restriction Enzyme 2	Not applicable.
Restriction Enzyme Buffer	Not applicable.
DNA Ligase	Not applicable.
Ligase buffer	Not applicable.
PCR Mix	Not applicable.
TE	Not applicable.
Adapter 1	Not applicable.
Adapter 2	Not applicable.
Forward PCR primer	Not applicable.
Reverse PCR Primer – Index 1 – 96	Not applicable.
Reverse NTC PCR Primer	Not applicable.
Custom Read 1 Sequencing Primer	Not applicable.
Restriction Enzyme 1	Not applicable.
Buffer DLB	Not applicable.
RNase-free Water	Not applicable.
REPLI-g DNAPolymerase	Not applicable.
DTT, 1M	Not applicable.
REPLI-g Single Cell Reaction. Buffer	Not applicable.
Stop Solution	Not applicable.
PBS, 1x	Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Restriction Enzyme 2			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263
Restriction Enzyme Buffer			
Magnesium di(acetate)	310	590	EU A.16
potassium acetate	>410	>770	EU A.16
DNA Ligase			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263
TE			
Edetic acid	>400	>752	VDI 2263
Adapter 1			
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	>400	>752	EU A.16
potassium acetate	>410	>770	EU A.16
Adapter 2			
4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid	>400	>752	EU A.16
potassium acetate	>410	>770	EU A.16
Forward PCR primer			
Edetic acid	>400	>752	VDI 2263

Section 9. Physical and chemical properties and safety characteristics

Reverse PCR Primer – Index 1 – 96			
Edetic acid	>400	>752	VDI 2263
Reverse NTC PCR Primer			
Edetic acid	>400	>752	VDI 2263
Custom Read 1 Sequencing Primer			
Edetic acid	>400	>752	VDI 2263
Restriction Enzyme 1			
Glycerol	370	698	
Edetic acid	>400	>752	VDI 2263
REPLI-g DNAPolymerase			
Glycerol	370	698	

Decomposition temperature :

Nuclease-Free Water	Not available.
Restriction Enzyme 2	Not available.
Restriction Enzyme Buffer	Not available.
DNA Ligase	Not available.
Ligase buffer	Not available.
PCR Mix	Not available.
TE	Not available.
Adapter 1	Not available.
Adapter 2	Not available.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.
Reverse NTC PCR Primer	Not available.
Custom Read 1 Sequencing Primer	Not available.
Restriction Enzyme 1	Not available.
Buffer DLB	Not available.
RNase-free Water	Not available.
REPLI-g DNAPolymerase	Not available.
DTT, 1M	Not available.
REPLI-g Single Cell Reaction. Buffer	Not available.
Stop Solution	Not available.
PBS, 1x	Not available.

Viscosity :

Nuclease-Free Water	Not available.
Restriction Enzyme 2	Not available.
Restriction Enzyme Buffer	Not available.
DNA Ligase	Not available.
Ligase buffer	Not available.
PCR Mix	Not available.
TE	Not available.
Adapter 1	Not available.
Adapter 2	Not available.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.
Reverse NTC PCR Primer	Not available.
Custom Read 1 Sequencing	Not available.

Section 9. Physical and chemical properties and safety characteristics

	Primer	
	Restriction Enzyme 1	Not available.
	Buffer DLB	Not applicable.
	RNase-free Water	Not available.
	REPLI-g DNAPolymerase	Not available.
	DTT, 1M	Not available.
	REPLI-g Single Cell Reaction. Buffer	Not available.
	Stop Solution	Not available.
	PBS, 1x	Not available.

Particle characteristics

Median particle size	: Nuclease-Free Water	Not applicable.
	Restriction Enzyme 2	Not applicable.
	Restriction Enzyme Buffer	Not applicable.
	DNA Ligase	Not applicable.
	Ligase buffer	Not applicable.
	PCR Mix	Not applicable.
	TE	Not applicable.
	Adapter 1	Not applicable.
	Adapter 2	Not applicable.
	Forward PCR primer	Not applicable.
	Reverse PCR Primer – Index 1 – 96	Not applicable.
	Reverse NTC PCR Primer	Not applicable.
	Custom Read 1 Sequencing Primer	Not applicable.
	Restriction Enzyme 1	Not applicable.
	Buffer DLB	Not available.
	RNase-free Water	Not applicable.
	REPLI-g DNAPolymerase	Not applicable.
	DTT, 1M	Not applicable.
	REPLI-g Single Cell Reaction. Buffer	Not applicable.
	Stop Solution	Not applicable.
	PBS, 1x	Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity	: Nuclease-Free Water	No specific test data related to reactivity available for this product or its ingredients.
	Restriction Enzyme 2	No specific test data related to reactivity available for this product or its ingredients.
	Restriction Enzyme Buffer	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.
	Ligase buffer	No specific test data related to reactivity available for this product or its ingredients.
	PCR Mix	No specific test data related to reactivity available for this product or its ingredients.
	TE	No specific test data related to reactivity available for this product or its ingredients.
	Adapter 1	No specific test data related to reactivity available for this product or its ingredients.
	Adapter 2	No specific test data related to reactivity available for this product or its ingredients.
	Forward PCR primer	No specific test data related to reactivity available for this product or its ingredients.
	Reverse PCR Primer – Index 1 – 96	No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

	Reverse NTC PCR Primer	No specific test data related to reactivity available for this product or its ingredients.
	Custom Read 1 Sequencing Primer	No specific test data related to reactivity available for this product or its ingredients.
	Restriction Enzyme 1	No specific test data related to reactivity available for this product or its ingredients.
	Buffer DLB	No specific test data related to reactivity available for this product or its ingredients.
	RNase-free Water	No specific test data related to reactivity available for this product or its ingredients.
	REPLI-g DNAPolymerase	No specific test data related to reactivity available for this product or its ingredients.
	DTT, 1M	No specific test data related to reactivity available for this product or its ingredients.
	REPLI-g Single Cell Reaction. Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Stop Solution	No specific test data related to reactivity available for this product or its ingredients.
	PBS, 1x	No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability :

Nuclease-Free Water	The product is stable.
Restriction Enzyme 2	The product is stable.
Restriction Enzyme Buffer	The product is stable.
DNA Ligase	The product is stable.
Ligase buffer	The product is stable.
PCR Mix	The product is stable.
TE	The product is stable.
Adapter 1	The product is stable.
Adapter 2	The product is stable.
Forward PCR primer	The product is stable.
Reverse PCR Primer – Index 1 – 96	The product is stable.
Reverse NTC PCR Primer	The product is stable.
Custom Read 1 Sequencing Primer	The product is stable.
Restriction Enzyme 1	The product is stable.
Buffer DLB	The product is stable.
RNase-free Water	The product is stable.
REPLI-g DNAPolymerase	The product is stable.
DTT, 1M	The product is stable.
REPLI-g Single Cell Reaction. Buffer	The product is stable.
Stop Solution	The product is stable.
PBS, 1x	The product is stable.

10.3 Possibility of hazardous reactions :

Nuclease-Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
Restriction Enzyme 2	Under normal conditions of storage and use, hazardous reactions will not occur.
Restriction Enzyme Buffer	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.
Ligase buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
PCR Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
TE	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

	Adapter 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	Adapter 2	Under normal conditions of storage and use, hazardous reactions will not occur.
	Forward PCR primer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Reverse PCR Primer – Index 1 – 96	Under normal conditions of storage and use, hazardous reactions will not occur.
	Reverse NTC PCR Primer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Custom Read 1 Sequencing Primer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Restriction Enzyme 1	Under normal conditions of storage and use, hazardous reactions will not occur.
	Buffer DLB	Under normal conditions of storage and use, hazardous reactions will not occur.
	RNase-free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
	REPLI-g DNAPolymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
	DTT, 1M	Under normal conditions of storage and use, hazardous reactions will not occur.
	REPLI-g Single Cell Reaction. Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Stop Solution	Under normal conditions of storage and use, hazardous reactions will not occur.
	PBS, 1x	Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	No specific data.
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	No specific data.
		Ligase buffer	No specific data.
		PCR Mix	No specific data.
		TE	No specific data.
		Adapter 1	No specific data.
		Adapter 2	No specific data.
		Forward PCR primer	No specific data.
		Reverse PCR Primer – Index 1 – 96	No specific data.
		Reverse NTC PCR Primer	No specific data.
		Custom Read 1 Sequencing Primer	No specific data.
		Restriction Enzyme 1	No specific data.
		Buffer DLB	No specific data.
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	No specific data.
		DTT, 1M	No specific data.
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.

Section 10. Stability and reactivity

10.5 Incompatible materials	:	Nuclease-Free Water	May react or be incompatible with oxidizing materials.
		Restriction Enzyme 2	May react or be incompatible with oxidizing materials.
		Restriction Enzyme Buffer	May react or be incompatible with oxidizing materials.
		DNA Ligase	May react or be incompatible with oxidizing materials.
		Ligase buffer	May react or be incompatible with oxidizing materials.
		PCR Mix	May react or be incompatible with oxidizing materials.
		TE	May react or be incompatible with oxidizing materials.
		Adapter 1	May react or be incompatible with oxidizing materials.
		Adapter 2	May react or be incompatible with oxidizing materials.
		Forward PCR primer	May react or be incompatible with oxidizing materials.
		Reverse PCR Primer – Index 1 – 96	May react or be incompatible with oxidizing materials.
		Reverse NTC PCR Primer	May react or be incompatible with oxidizing materials.
		Custom Read 1 Sequencing Primer	May react or be incompatible with oxidizing materials.
		Restriction Enzyme 1	May react or be incompatible with oxidizing materials.
		Buffer DLB	Reactive or incompatible with the following materials: metals, acids, oxidizing agents.
		RNase-free Water	May react or be incompatible with oxidizing materials.
		REPLI-g DNAPolymerase	May react or be incompatible with oxidizing materials.
		DTT, 1M	May react or be incompatible with oxidizing materials.
		REPLI-g Single Cell Reaction. Buffer	May react or be incompatible with oxidizing materials.
		Stop Solution	May react or be incompatible with oxidizing materials.
		PBS, 1x	May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	:	Nuclease-Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Restriction Enzyme 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Restriction Enzyme Buffer	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.
		Ligase buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		PCR Mix	Under normal conditions of storage and use,

Section 10. Stability and reactivity

	hazardous decomposition products should not be produced.
TE	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Adapter 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Adapter 2	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Forward PCR primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Reverse PCR Primer – Index 1 – 96	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Reverse NTC PCR Primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Custom Read 1 Sequencing Primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Restriction Enzyme 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Buffer DLB	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
RNase-free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
REPLI-g DNAPolymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
DTT, 1M	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
REPLI-g Single Cell Reaction. Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Stop Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
PBS, 1x	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

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Restriction Enzyme 2				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
DNA Ligase				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Ligase buffer				
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat	2800 mg/kg	-
Restriction Enzyme 1				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
Buffer DLB				
Potassium hydroxide	LD50 Oral	Rat	273 mg/kg	-
REPLI-g DNAPolymerase				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Restriction Enzyme 2					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
DNA Ligase					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Restriction Enzyme 1					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
Buffer DLB					
Potassium hydroxide	Eyes - Moderate irritant	Rabbit	-	24 hours 1 mg	-
	Skin - Severe irritant	Guinea pig	-	24 hours 50 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 50 mg	-
REPLI-g DNAPolymerase					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Section 11. Toxicological information

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Restriction Enzyme Buffer			
[2-Hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium acetate	Category 3	-	Respiratory tract irritation
Ligase buffer			
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	-	Respiratory tract irritation
DTT, 1M			
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Buffer DLB			
Edetic acid	Category 2	-	kidneys

Aspiration hazard

Not available.

Information on the likely routes of exposure :

Nuclease-Free Water	Not available.
Restriction Enzyme 2	Routes of entry anticipated: Oral, Dermal, Inhalation.
Restriction Enzyme Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
DNA Ligase	Routes of entry anticipated: Oral, Dermal, Inhalation.
Ligase buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
PCR Mix	Not available.
TE	Not available.
Adapter 1	Not available.
Adapter 2	Not available.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.
Reverse NTC PCR Primer	Not available.
Custom Read 1 Sequencing Primer	Not available.
Restriction Enzyme 1	Routes of entry anticipated: Oral, Dermal, Inhalation.
Buffer DLB	Routes of entry anticipated: Oral, Dermal,

Section 11. Toxicological information

		Inhalation.
	RNase-free Water	Not available.
	REPLI-g DNAPolymerase	Routes of entry anticipated: Oral, Dermal, Inhalation.
	DTT, 1M	Routes of entry anticipated: Oral, Dermal, Inhalation.
	REPLI-g Single Cell Reaction. Buffer	Not available.
	Stop Solution	Not available.
	PBS, 1x	Not available.

Potential acute health effects

Eye contact :	Nuclease-Free Water	No known significant effects or critical hazards.
	Restriction Enzyme 2	Causes eye irritation.
	Restriction Enzyme Buffer	No known significant effects or critical hazards.
	DNA Ligase	Causes eye irritation.
	Ligase buffer	No known significant effects or critical hazards.
	PCR Mix	No known significant effects or critical hazards.
	TE	No known significant effects or critical hazards.
	Adapter 1	No known significant effects or critical hazards.
	Adapter 2	No known significant effects or critical hazards.
	Forward PCR primer	No known significant effects or critical hazards.
	Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	Causes eye irritation.
	Buffer DLB	Causes serious eye damage.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	Causes eye irritation.
	DTT, 1M	Causes serious eye irritation.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.
Inhalation :	Nuclease-Free Water	No known significant effects or critical hazards.
	Restriction Enzyme 2	No known significant effects or critical hazards.
	Restriction Enzyme Buffer	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligase buffer	No known significant effects or critical hazards.
	PCR Mix	No known significant effects or critical hazards.
	TE	No known significant effects or critical hazards.
	Adapter 1	No known significant effects or critical hazards.
	Adapter 2	No known significant effects or critical hazards.
	Forward PCR primer	No known significant effects or critical hazards.
	Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	No known significant effects or critical hazards.
	Buffer DLB	No known significant effects or critical hazards.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	No known significant effects or critical hazards.
	DTT, 1M	May cause respiratory irritation.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.

Section 11. Toxicological information

Skin contact	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	No known significant effects or critical hazards.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
		Reverse NTC PCR Primer	No known significant effects or critical hazards.
		Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
		Restriction Enzyme 1	No known significant effects or critical hazards.
		Buffer DLB	Causes severe burns.
		RNase-free Water	No known significant effects or critical hazards.
		REPLI-g DNAPolymerase	No known significant effects or critical hazards.
		DTT, 1M	Causes skin irritation.
		REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		PBS, 1x	No known significant effects or critical hazards.
Ingestion	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	No known significant effects or critical hazards.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
		Reverse NTC PCR Primer	No known significant effects or critical hazards.
		Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
		Restriction Enzyme 1	No known significant effects or critical hazards.
		Buffer DLB	Toxic if swallowed. Severely corrosive to the digestive tract. Causes severe burns.
		RNase-free Water	No known significant effects or critical hazards.
		REPLI-g DNAPolymerase	No known significant effects or critical hazards.
		DTT, 1M	No known significant effects or critical hazards.
		REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		PBS, 1x	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	Adverse symptoms may include the following: irritation watering redness
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	Adverse symptoms may include the following: irritation watering

Section 11. Toxicological information

		redness
	Ligase buffer	No specific data.
	PCR Mix	No specific data.
	TE	No specific data.
	Adapter 1	No specific data.
	Adapter 2	No specific data.
	Forward PCR primer	No specific data.
	Reverse PCR Primer – Index 1 – 96	No specific data.
	Reverse NTC PCR Primer	No specific data.
	Custom Read 1 Sequencing Primer	No specific data.
	Restriction Enzyme 1	Adverse symptoms may include the following: irritation watering redness
	Buffer DLB	Adverse symptoms may include the following: pain watering redness
	RNase-free Water	No specific data.
	REPLI-g DNAPolymerase	Adverse symptoms may include the following: irritation watering redness
	DTT, 1M	Adverse symptoms may include the following: pain or irritation watering redness
	REPLI-g Single Cell Reaction. Buffer	No specific data.
	Stop Solution	No specific data.
	PBS, 1x	No specific data.
Inhalation :	Nuclease-Free Water	No specific data.
	Restriction Enzyme 2	No specific data.
	Restriction Enzyme Buffer	No specific data.
	DNA Ligase	No specific data.
	Ligase buffer	No specific data.
	PCR Mix	No specific data.
	TE	No specific data.
	Adapter 1	No specific data.
	Adapter 2	No specific data.
	Forward PCR primer	No specific data.
	Reverse PCR Primer – Index 1 – 96	No specific data.
	Reverse NTC PCR Primer	No specific data.
	Custom Read 1 Sequencing Primer	No specific data.
	Restriction Enzyme 1	No specific data.
	Buffer DLB	No specific data.
	RNase-free Water	No specific data.
	REPLI-g DNAPolymerase	No specific data.
	DTT, 1M	Adverse symptoms may include the following: respiratory tract irritation coughing
	REPLI-g Single Cell Reaction. Buffer	No specific data.
	Stop Solution	No specific data.
	PBS, 1x	No specific data.

Section 11. Toxicological information

Skin contact	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	No specific data.
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	No specific data.
		Ligase buffer	No specific data.
		PCR Mix	No specific data.
		TE	No specific data.
		Adapter 1	No specific data.
		Adapter 2	No specific data.
		Forward PCR primer	No specific data.
		Reverse PCR Primer – Index 1 – 96	No specific data.
		Reverse NTC PCR Primer	No specific data.
		Custom Read 1 Sequencing Primer	No specific data.
		Restriction Enzyme 1	No specific data.
		Buffer DLB	Adverse symptoms may include the following: pain or irritation redness blistering may occur
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	No specific data.
		DTT, 1M	Adverse symptoms may include the following: irritation redness
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.
Ingestion	:	Nuclease-Free Water	No specific data.
		Restriction Enzyme 2	No specific data.
		Restriction Enzyme Buffer	No specific data.
		DNA Ligase	No specific data.
		Ligase buffer	No specific data.
		PCR Mix	No specific data.
		TE	No specific data.
		Adapter 1	No specific data.
		Adapter 2	No specific data.
		Forward PCR primer	No specific data.
		Reverse PCR Primer – Index 1 – 96	No specific data.
		Reverse NTC PCR Primer	No specific data.
		Custom Read 1 Sequencing Primer	No specific data.
		Restriction Enzyme 1	No specific data.
		Buffer DLB	Adverse symptoms may include the following: stomach pains
		RNase-free Water	No specific data.
		REPLI-g DNAPolymerase	No specific data.
		DTT, 1M	No specific data.
		REPLI-g Single Cell Reaction. Buffer	No specific data.
		Stop Solution	No specific data.
		PBS, 1x	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Section 11. Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Nuclease-Free Water	No known significant effects or critical hazards.
	Restriction Enzyme 2	No known significant effects or critical hazards.
	Restriction Enzyme Buffer	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligase buffer	No known significant effects or critical hazards.
	PCR Mix	No known significant effects or critical hazards.
	TE	No known significant effects or critical hazards.
	Adapter 1	No known significant effects or critical hazards.
	Adapter 2	No known significant effects or critical hazards.
	Forward PCR primer	No known significant effects or critical hazards.
	Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	No known significant effects or critical hazards.
	Buffer DLB	May cause damage to organs through prolonged or repeated exposure.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	No known significant effects or critical hazards.
	DTT, 1M	No known significant effects or critical hazards.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.
Carcinogenicity	: Nuclease-Free Water	No known significant effects or critical hazards.
	Restriction Enzyme 2	No known significant effects or critical hazards.
	Restriction Enzyme Buffer	No known significant effects or critical hazards.
	DNA Ligase	No known significant effects or critical hazards.
	Ligase buffer	No known significant effects or critical hazards.
	PCR Mix	No known significant effects or critical hazards.
	TE	No known significant effects or critical hazards.
	Adapter 1	No known significant effects or critical hazards.
	Adapter 2	No known significant effects or critical hazards.
	Forward PCR primer	No known significant effects or critical hazards.
	Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
	Reverse NTC PCR Primer	No known significant effects or critical hazards.
	Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
	Restriction Enzyme 1	No known significant effects or critical hazards.
	Buffer DLB	No known significant effects or critical hazards.
	RNase-free Water	No known significant effects or critical hazards.
	REPLI-g DNAPolymerase	No known significant effects or critical hazards.
	DTT, 1M	No known significant effects or critical hazards.
	REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
	Stop Solution	No known significant effects or critical hazards.
	PBS, 1x	No known significant effects or critical hazards.

Section 11. Toxicological information

Mutagenicity	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	No known significant effects or critical hazards.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
		Reverse NTC PCR Primer	No known significant effects or critical hazards.
		Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
		Restriction Enzyme 1	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		RNase-free Water	No known significant effects or critical hazards.
		REPLI-g DNAPolymerase	No known significant effects or critical hazards.
		DTT, 1M	No known significant effects or critical hazards.
		REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		PBS, 1x	No known significant effects or critical hazards.
Reproductive toxicity	:	Nuclease-Free Water	No known significant effects or critical hazards.
		Restriction Enzyme 2	No known significant effects or critical hazards.
		Restriction Enzyme Buffer	No known significant effects or critical hazards.
		DNA Ligase	No known significant effects or critical hazards.
		Ligase buffer	No known significant effects or critical hazards.
		PCR Mix	No known significant effects or critical hazards.
		TE	No known significant effects or critical hazards.
		Adapter 1	No known significant effects or critical hazards.
		Adapter 2	No known significant effects or critical hazards.
		Forward PCR primer	No known significant effects or critical hazards.
		Reverse PCR Primer – Index 1 – 96	No known significant effects or critical hazards.
		Reverse NTC PCR Primer	No known significant effects or critical hazards.
		Custom Read 1 Sequencing Primer	No known significant effects or critical hazards.
		Restriction Enzyme 1	No known significant effects or critical hazards.
		Buffer DLB	No known significant effects or critical hazards.
		RNase-free Water	No known significant effects or critical hazards.
		REPLI-g DNAPolymerase	No known significant effects or critical hazards.
		DTT, 1M	No known significant effects or critical hazards.
		REPLI-g Single Cell Reaction. Buffer	No known significant effects or critical hazards.
		Stop Solution	No known significant effects or critical hazards.
		PBS, 1x	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Restriction Enzyme 2					
Glycerol	12600	N/A	N/A	N/A	N/A
Restriction Enzyme Buffer					
Restriction Enzyme Buffer	66326.5	N/A	N/A	N/A	N/A
DNA Ligase					
Glycerol	12600	N/A	N/A	N/A	N/A
Ligase buffer					
Ligase buffer	33333.3	N/A	N/A	N/A	N/A
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	500	N/A	N/A	N/A	N/A
Magnesium chloride	2800	2500	N/A	N/A	N/A
Restriction Enzyme 1					
Restriction Enzyme 1	176630.4	N/A	N/A	N/A	N/A
Glycerol	12600	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
Buffer DLB					
Buffer DLB	273	N/A	N/A	N/A	N/A
Potassium hydroxide	273	N/A	N/A	N/A	N/A
REPLI-g DNAPolymerase					
Glycerol	12600	N/A	N/A	N/A	N/A
DTT, 1M					
DTT, 1M	2500	N/A	N/A	N/A	N/A
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	500	N/A	N/A	N/A	N/A

Other information :

Nuclease-Free Water	Not available.
Restriction Enzyme 2	Not available.
Restriction Enzyme Buffer	Not available.
DNA Ligase	Not available.
Ligase buffer	Adverse symptoms may include the following: May cause skin sensitization.
PCR Mix	Not available.
TE	Not available.
Adapter 1	Not available.
Adapter 2	Not available.
Forward PCR primer	Not available.
Reverse PCR Primer – Index 1 – 96	Not available.
Reverse NTC PCR Primer	Not available.
Custom Read 1 Sequencing Primer	Not available.
Restriction Enzyme 1	Not available.
Buffer DLB	Not available.
RNase-free Water	Not available.
REPLI-g DNAPolymerase	Not available.
DTT, 1M	Adverse symptoms may include the following: May cause skin sensitization.
REPLI-g Single Cell Reaction.	Not available.

Section 11. Toxicological information

Buffer	
Stop Solution	Not available.
PBS, 1x	Not available.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Restriction Enzyme 2			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
DNA Ligase			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Ligase buffer			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
Magnesium chloride	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - Eudiaptomus padanus ssp. padanus - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - Lemna aequinoctialis	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - Daphnia hyalina - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute NOEC 100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Chronic NOEC 0.1 mg/l Fresh water	Fish - Cyprinus carpio	35 days
Restriction Enzyme 1			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - Danio rerio	96 hours
Buffer DLB			
Potassium hydroxide	Acute LC50 80 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
Edetic acid	Acute EC50 113000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 41000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
REPLI-g DNAPolymerase			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
DTT, 1M			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours

12.2 Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Restriction Enzyme 2				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
DNA Ligase				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Restriction Enzyme 1				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
REPLI-g DNAPolymerase				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Nuclease-Free Water			
water	-	-	Readily
Restriction Enzyme 1			
Potassium chloride	-	-	Readily
Buffer DLB			
Edetic acid	-	-	Not readily
RNase-free Water			
water	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Nuclease-Free Water			
water	-1.38	-	low
Restriction Enzyme 2			
Glycerol	-1.76	-	low
DNA Ligase			
Glycerol	-1.76	-	low
Restriction Enzyme 1			
Glycerol	-1.76	-	low
Potassium chloride	-0.46	-	low
Buffer DLB			
Edetic acid	-3.86	1.8	low
RNase-free Water			

Section 12. Ecological information

water	-1.38	-	low
REPLI-g DNAPolymerase			
Glycerol	-1.76	-	low

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

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

Additional information

Remarks: De minimis quantities

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Clean Water Act (CWA) 311: Potassium hydroxide; Edetic acid; Sodium hydroxide; Phosphoric acid, disodium salt, dihydrate

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification :

Nuclease-Free Water	Not applicable.
Restriction Enzyme 2	EYE IRRITATION - Category 2B
Restriction Enzyme Buffer	Not applicable.
DNA Ligase	EYE IRRITATION - Category 2B
Ligase buffer	Not applicable.
PCR Mix	Not applicable.
TE	Not applicable.
Adapter 1	Not applicable.
Adapter 2	Not applicable.
Forward PCR primer	Not applicable.
Reverse PCR Primer – Index 1 – 96	Not applicable.
Reverse NTC PCR Primer	Not applicable.
Custom Read 1 Sequencing Primer	Not applicable.
Restriction Enzyme 1	EYE IRRITATION - Category 2B
Buffer DLB	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 3 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 HNOC - Corrosive to digestive tract [severe]
RNase-free Water	Not applicable.
REPLI-g DNAPolymerase	EYE IRRITATION - Category 2B
DTT, 1M	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
REPLI-g Single Cell Reaction.Buffer	Not applicable.
Stop Solution	Not applicable.
PBS, 1x	Not applicable.

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
Restriction Enzyme 2		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2B
Restriction Enzyme Buffer		
potassium acetate	≤5	COMBUSTIBLE DUSTS
[2-Hydroxy-1,1-bis (hydroxymethyl)ethyl]ammonium acetate	≤5	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
DNA Ligase		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2B
Ligase buffer		
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≤3	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Restriction Enzyme 1		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2B
Potassium chloride	≤3	EYE IRRITATION - Category 2B
Buffer DLB		
Potassium hydroxide	≥75 - ≤90	CORROSIVE TO METALS - Category 1 ACUTE TOXICITY (oral) - Category 3 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 HNOC - Corrosive to digestive tract [severe]
Edetic acid	≥10 - ≤25	EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
REPLI-g DNAPolymerase		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2B
DTT, 1M		
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	≥10 - <25	ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST; POTASSIUM HYDROXIDE

New York : The following components are listed: Potassium hydroxide

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL; POTASSIUM HYDROXIDE; POTASSIUM HYDRATE; CAUSTIC POTASH

Pennsylvania : The following components are listed: 1,2,3-PROPANETRIOL; POTASSIUM HYDROXIDE

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Section 15. Regulatory information

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.
Europe	:	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	:	Not determined.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	Not determined.
Viet Nam	:	Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Restriction Enzyme 2	
EYE IRRITATION - Category 2B	Calculation method
DNA Ligase	
EYE IRRITATION - Category 2B	Calculation method
Ligase buffer	
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method
Restriction Enzyme 1	
EYE IRRITATION - Category 2B	Calculation method
Buffer DLB	
CORROSIVE TO METALS - Category 1	Expert judgment
ACUTE TOXICITY (oral) - Category 3	Calculation method
SKIN CORROSION - Category 1	On basis of test data
SERIOUS EYE DAMAGE - Category 1	On basis of test data
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method
REPLI-g DNAPolymerase	
EYE IRRITATION - Category 2B	Calculation method
DTT, 1M	
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method

Section 16. Other information

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method

History

Date of issue : 04/01/2022

Date of previous issue : 04/06/2018

Version : 2

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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