

SAFETY DATA SHEET

SureTag DNA Labeling Kit, Part Number 5190-3400

Section 1. Identification

1.1 Product identifier

Product name : SureTag DNA Labeling Kit, Part Number 5190-3400

Part no. (chemical kit) : 5190-3400

Part no. :

<input checked="" type="checkbox"/> Nuclease Free Water	5190-0439
Random Primers	5190-0441
5X gDNA Reaction Buffer	5190-3387
Alu I	5190-3394
Rsa I	5190-3395
10X Restriction Enzyme Buffer	5190-3396
BSA	5190-3397
10X dNTP Mix	5190-3388
Exo(-) Klenow	5190-0437
Cyanine-3-dUTP	5190-3389
Cyanine-5-dUTP	5190-3390

Validation date : 4/26/2018

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

Material uses : Analytical reagent.

<input checked="" type="checkbox"/> Nuclease Free Water	1500 µl
Random Primers	265 µl
5X gDNA Reaction Buffer	550 µl
Alu I	10 U/µl 28 µl
Rsa I	10 U/µl 28 µl
10X Restriction Enzyme Buffer	142 µl
BSA	15 µl
10X dNTP Mix	265 µl
Exo(-) Klenow	55 µl
Cyanine-3-dUTP	78 µl
Cyanine-5-dUTP	78 µl

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 :	<input checked="" type="checkbox"/> 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.
	Random Primers	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.

Section 2. Hazards identification

	1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
5X gDNA Reaction Buffer	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Alu I	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Rsa I	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
10X 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.
BSA	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.
10X dNTP Mix	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
Exo(-) Klenow	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Cyanine-3-dUTP	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.
Cyanine-5-dUTP	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

5X gDNA Reaction Buffer

H317 SKIN SENSITIZATION - Category 1

Alu I

H320 EYE IRRITATION - Category 2B

Rsa I

H319 EYE IRRITATION - Category 2A

Exo(-) Klenow



H320 EYE IRRITATION - Category 2B

Section 2. Hazards identification

Ingredients of unknown toxicity	: 5X gDNA Reaction Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
	Alu I	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
	Rsa I	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
	10X Restriction Enzyme Buffer	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
	BSA	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
	Exo(-) Klenow	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%

2.2 GHS label elements

Hazard pictograms

: 5X gDNA Reaction Buffer	
Rsa I	

Signal word

: Nuclease Free Water	No signal word.
Random Primers	No signal word.
5X gDNA Reaction Buffer	Warning
Alu I	Warning
Rsa I	Warning
10X Restriction Enzyme Buffer	No signal word.
BSA	No signal word.
10X dNTP Mix	No signal word.
Exo(-) Klenow	Warning
Cyanine-3-dUTP	No signal word.
Cyanine-5-dUTP	No signal word.

Section 2. Hazards identification

Hazard statements	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No known significant effects or critical hazards. No known significant effects or critical hazards. H317 - May cause an allergic skin reaction. H320 - Causes eye irritation. H319 - Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. H320 - Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. P280 - Wear protective gloves. P261 - Avoid breathing vapor. P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace. P264 - Wash hands thoroughly after handling. P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling. Not applicable. Not applicable. Not applicable. P264 - Wash hands thoroughly after handling. Not applicable. Not applicable.
Response	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	Not applicable. Not applicable. P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. Not applicable. Not applicable. Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. Not applicable. Not applicable.

Section 2. Hazards identification

Storage	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not applicable.
		Random Primers	Not applicable.
		5X gDNA Reaction Buffer	Not applicable.
		Alu I	Not applicable.
		Rsa I	Not applicable.
		10X Restriction Enzyme Buffer	Not applicable.
		BSA	Not applicable.
		10X dNTP Mix	Not applicable.
		Exo(-) Klenow	Not applicable.
		Cyanine-3-dUTP	Not applicable.
Cyanine-5-dUTP	Not applicable.		
Disposal	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not applicable.
		Random Primers	Not applicable.
		5X gDNA Reaction Buffer	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Alu I	Not applicable.
		Rsa I	Not applicable.
		10X Restriction Enzyme Buffer	Not applicable.
		BSA	Not applicable.
		10X dNTP Mix	Not applicable.
		Exo(-) Klenow	Not applicable.
		Cyanine-3-dUTP	Not applicable.
Cyanine-5-dUTP	Not applicable.		
Supplemental label elements	:	<input checked="" type="checkbox"/> Nuclease Free Water	None known.
		Random Primers	None known.
		5X gDNA Reaction Buffer	None known.
		Alu I	None known.
		Rsa I	None known.
		10X Restriction Enzyme Buffer	None known.
		BSA	None known.
		10X dNTP Mix	None known.
		Exo(-) Klenow	None known.
		Cyanine-3-dUTP	None known.
Cyanine-5-dUTP	None known.		
2.3 Other hazards			
Hazards not otherwise classified	:	<input checked="" type="checkbox"/> Nuclease Free Water	None known.
		Random Primers	None known.
		5X gDNA Reaction Buffer	None known.
		Alu I	None known.
		Rsa I	None known.
		10X Restriction Enzyme Buffer	None known.
		BSA	None known.
		10X dNTP Mix	None known.
		Exo(-) Klenow	None known.
		Cyanine-3-dUTP	None known.
Cyanine-5-dUTP	None known.		

Section 3. Composition/information on ingredients

Substance/mixture	:	<input checked="" type="checkbox"/> Nuclease Free Water	Substance
		Random Primers	Mixture
		5X gDNA Reaction Buffer	Mixture
		Alu I	Mixture
		Rsa I	Mixture
		10X Restriction Enzyme Buffer	Mixture
		BSA	Mixture

Section 3. Composition/information on ingredients

10X dNTP Mix	Mixture
Exo(-) Klenow	Mixture
Cyanine-3-dUTP	Mixture
Cyanine-5-dUTP	Mixture

Ingredient name	%	CAS number
Nuclease Free Water Water	100	7732-18-5
5X gDNA Reaction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤5	1185-53-1
2-Mercaptoethanol	<1	60-24-2
Alu I Glycerol	≥50 - ≤75	56-81-5
Rsa I Glycerol	≥50 - ≤75	56-81-5
Sodium chloride	≤3	7647-14-5
10X Restriction Enzyme Buffer Sodium chloride	≤3	7647-14-5
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	1185-53-1
Exo(-) Klenow Glycerol	≥50 - ≤75	56-81-5

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

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: 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.
	Random Primers	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.
	5X gDNA Reaction 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.
	Alu I	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.
	Rsa I	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses.

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Continue to rinse for at least 10 minutes. Get medical attention.

10X 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.

BSA

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.

10X dNTP Mix

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Exo(-) Klenow

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.

Cyanine-3-dUTP

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.

Cyanine-5-dUTP

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.

Random Primers

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

5X gDNA Reaction 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.

Alu I

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

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Rsa I	an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
10X 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.
BSA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
10X dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Exo(-) Klenow	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.
Cyanine-3-dUTP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Cyanine-5-dUTP	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.
Random Primers	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
5X gDNA Reaction Buffer	Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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Alu I	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.
Rsa I	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.
10X Restriction Enzyme Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
BSA	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
10X dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Exo(-) Klenow	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.
Cyanine-3-dUTP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Cyanine-5-dUTP	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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Random Primers	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
5X gDNA Reaction Buffer	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie,

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

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Cyanine-3-dUTP	<p>Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p> <p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>
Cyanine-5-dUTP	<p>Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.</p>

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA	No known significant effects or critical hazards. No known significant effects or critical hazards. May cause an allergic skin reaction. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

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	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Ingestion	: <input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: <input checked="" type="checkbox"/> Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	No specific data.
	Alu I	Adverse symptoms may include the following: irritation watering redness
	Rsa I	Adverse symptoms may include the following: pain or irritation watering redness
	10X Restriction Enzyme Buffer	No specific data.
	BSA	No specific data.
	10X dNTP Mix	No specific data.
	Exo(-) Klenow	Adverse symptoms may include the following: irritation watering redness
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.
Inhalation	: <input checked="" type="checkbox"/> Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	No specific data.
	Alu I	No specific data.
	Rsa I	No specific data.
	10X Restriction Enzyme Buffer	No specific data.
	BSA	No specific data.
	10X dNTP Mix	No specific data.
	Exo(-) Klenow	No specific data.
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.
Skin contact	: <input checked="" type="checkbox"/> Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	Adverse symptoms may include the following: irritation redness
	Alu I	No specific data.
	Rsa I	No specific data.
	10X Restriction Enzyme Buffer	No specific data.
	BSA	No specific data.
	10X dNTP Mix	No specific data.
	Exo(-) Klenow	No specific data.

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Ingestion		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
		☑ Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Alu I	No specific data.
		Rsa I	No specific data.
		10X Restriction Enzyme Buffer	No specific data.
		BSA	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
	Cyanine-3-dUTP	No specific data.	
	Cyanine-5-dUTP	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.
		Random Primers	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		5X gDNA Reaction Buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Alu I	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Rsa I	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		10X 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.
		BSA	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		10X dNTP Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Exo(-) Klenow	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Cyanine-3-dUTP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Cyanine-5-dUTP	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments		☑ Nuclease Free Water	No specific treatment.
		Random Primers	No specific treatment.
		5X gDNA Reaction Buffer	No specific treatment.
		Alu I	No specific treatment.
		Rsa I	No specific treatment.
		10X Restriction Enzyme Buffer	No specific treatment.
		BSA	No specific treatment.
	10X dNTP Mix	No specific treatment.	

Section 4. First aid measures

	Exo(-) Klenow	No specific treatment.
	Cyanine-3-dUTP	No specific treatment.
	Cyanine-5-dUTP	No specific treatment.
Protection of first-aiders	: Nuclease Free Water	No action shall be taken involving any personal risk or without suitable training.
	Random Primers	No action shall be taken involving any personal risk or without suitable training.
	5X gDNA Reaction 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	Alu I	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.
	Rsa I	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.
	10X Restriction Enzyme Buffer	No action shall be taken involving any personal risk or without suitable training.
	BSA	No action shall be taken involving any personal risk or without suitable training.
	10X dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
	Exo(-) Klenow	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.
	Cyanine-3-dUTP	No action shall be taken involving any personal risk or without suitable training.
	Cyanine-5-dUTP	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.
	Random Primers	Use an extinguishing agent suitable for the surrounding fire.
	5X gDNA Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
	Alu I	Use an extinguishing agent suitable for the surrounding fire.
	Rsa I	Use an extinguishing agent suitable for the surrounding fire.
	10X Restriction Enzyme Buffer	Use an extinguishing agent suitable for the surrounding fire.
	BSA	Use an extinguishing agent suitable for the surrounding fire.
	10X dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
	Exo(-) Klenow	Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

	Cyanine-3-dUTP	surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
	Cyanine-5-dUTP	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: <input checked="" type="checkbox"/> Nuclease Free Water	None known.
	Random Primers	None known.
	5X gDNA Reaction Buffer	None known.
	Alu I	None known.
	Rsa I	None known.
	10X Restriction Enzyme Buffer	None known.
	BSA	None known.
	10X dNTP Mix	None known.
	Exo(-) Klenow	None known.
	Cyanine-3-dUTP	None known.
	Cyanine-5-dUTP	None known.

5.2 Special hazards arising from the substance or mixture


Specific hazards arising from the chemical	: <input checked="" type="checkbox"/> Nuclease Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	Random Primers	In a fire or if heated, a pressure increase will occur and the container may burst.
	5X gDNA Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	Alu I	In a fire or if heated, a pressure increase will occur and the container may burst.
	Rsa I	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X Restriction Enzyme Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	BSA	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	Exo(-) Klenow	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cyanine-3-dUTP	In a fire or if heated, a pressure increase will occur and the container may burst.
	Cyanine-5-dUTP	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: <input checked="" type="checkbox"/> Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
	Alu I	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
	Rsa I	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds

Section 5. Fire-fighting measures

10X Restriction Enzyme Buffer	metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
BSA	metal oxide/oxides Decomposition products may include the following materials: carbon dioxide carbon monoxide
10X dNTP Mix Exo(-) Klenow	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide
Cyanine-3-dUTP Cyanine-5-dUTP	No specific data. No specific data.

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.
Random Primers	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.
5X gDNA 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.
Alu I	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.
Rsa I	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.
10X 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.
BSA	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.
10X dNTP Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Exo(-) Klenow	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.
Cyanine-3-dUTP	Promptly isolate the scene by removing all persons

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

Cyanine-5-dUTP	from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
: <input checked="" type="checkbox"/> 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.
Random Primers	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
5X gDNA 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.
Alu I	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Rsa I	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10X 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.
BSA	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
10X dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Exo(-) Klenow	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Cyanine-3-dUTP	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Cyanine-5-dUTP	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.

Random Primers

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.

5X gDNA 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Alu I

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.

Rsa I

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.

10X 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.

BSA

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.

10X dNTP Mix


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

Section 6. Accidental release measures

Exo(-) Klenow	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.
Cyanine-3-dUTP	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.
Cyanine-5-dUTP	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders : 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".
Random Primers	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".
5X gDNA 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".
Alu I	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".
Rsa I	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".
10X 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".
BSA	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".
10X dNTP Mix	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Exo(-) Klenow	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".
Cyanine-3-dUTP	If specialized clothing is required to deal with the spillage, take note of any information in Section 8

Section 6. Accidental release measures

6.2 Environmental precautions

Cyanine-5-dUTP	on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
:  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).
Random Primers	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).
5X gDNA Reaction Buffer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Alu I	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).
Rsa I	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).
10X 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).
BSA	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).
10X dNTP Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Exo(-) Klenow	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).
Cyanine-3-dUTP	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).
Cyanine-5-dUTP	Avoid dispersal of spilled material and runoff and

Section 6. Accidental release measures

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

Random Primers

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.

5X gDNA 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.

Alu I

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.

Rsa I

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.

10X 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.

BSA

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.

10X dNTP Mix

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

Exo(-) Klenow

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

Cyanine-3-dUTP	disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Cyanine-5-dUTP	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

<ul style="list-style-type: none"> ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer 	<p>Put on appropriate personal protective equipment (see Section 8).</p> <p>Put on appropriate personal protective equipment (see Section 8).</p> <p>Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. 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.</p>
Alu I	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.
Rsa I	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.
10X Restriction Enzyme Buffer	Put on appropriate personal protective equipment (see Section 8).
BSA	Put on appropriate personal protective equipment (see Section 8).
10X dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
Exo(-) Klenow	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

Section 7. Handling and storage

Advice on general occupational hygiene

		tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	Cyanine-3-dUTP	Put on appropriate personal protective equipment (see Section 8).
	Cyanine-5-dUTP	Put on appropriate personal protective equipment (see Section 8).
	<input checked="" type="checkbox"/> 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.
	Random Primers	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.
	5X gDNA 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.
	Alu I	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.
	Rsa I	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.
	10X 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.
	BSA	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.
	10X dNTP Mix	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

Section 7. Handling and storage

	<p>Exo(-) Klenow</p> <p>Cyanine-3-dUTP</p> <p>Cyanine-5-dUTP</p>	<p>before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	<p>: Nuclease Free Water</p> <p>Random Primers</p> <p>5X gDNA Reaction Buffer</p>	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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</p>

Section 7. Handling and storage

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

Section 7. Handling and storage

Cyanine-3-dUTP	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. 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.
Cyanine-5-dUTP	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations

<ul style="list-style-type: none"> ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
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Industrial sector specific solutions

<ul style="list-style-type: none"> ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
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Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>Nuclease Free Water Water</p>	<p>None.</p>
<p>5X gDNA Reaction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride 2-Mercaptoethanol</p>	<p>None. AIHA WEEL (United States, 10/2011). Absorbed through skin. TWA: 0.2 ppm 8 hours.</p>
<p>Alu I Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>Rsa I Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
<p>Sodium chloride</p>	<p>None.</p>
<p>10X Restriction Enzyme Buffer Sodium chloride 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</p>	<p>None. None.</p>
<p>Exo(-) Klenow Glycerol</p>	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust OSHA PEL (United States, 6/2016). TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust</p>

8.2 Exposure controls

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

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

Section 8. Exposure controls/personal protection

Individual protection measures

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

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	☑ Nuclease Free Water	Liquid.		
		Random Primers	Liquid.		
		5X gDNA Reaction Buffer	Liquid.		
		Alu I	Liquid.		
		Rsa I	Liquid.		
		10X Restriction Enzyme Buffer	Liquid.		
		BSA	Liquid.		
		10X dNTP Mix	Liquid.		
		Exo(-) Klenow	Liquid.		
		Cyanine-3-dUTP	Liquid.		
		Cyanine-5-dUTP	Liquid.		
		Color	:	☑ Nuclease Free Water	Colorless.
				Random Primers	Not available.
				5X gDNA Reaction Buffer	Not available.
Alu I	Not available.				
Rsa I	Not available.				
10X Restriction Enzyme Buffer	Not available.				
BSA	Not available.				
10X dNTP Mix	Not available.				
Exo(-) Klenow	Not available.				
Cyanine-3-dUTP	Not available.				
Cyanine-5-dUTP	Not available.				

Section 9. Physical and chemical properties

Odor	:	<input checked="" type="checkbox"/> Nuclease Free Water	Odorless.
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Alu I	Not available.
		Rsa I	Not available.
		10X Restriction Enzyme Buffer	Not available.
		BSA	Not available.
		10X dNTP Mix	Not available.
		Exo(-) Klenow	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
Odor threshold	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Alu I	Not available.
		Rsa I	Not available.
		10X Restriction Enzyme Buffer	Not available.
		BSA	Not available.
		10X dNTP Mix	Not available.
		Exo(-) Klenow	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
pH	:	<input checked="" type="checkbox"/> Nuclease Free Water	7
		Random Primers	8
		5X gDNA Reaction Buffer	7.5
		Alu I	7.4
		Rsa I	7.4
		10X Restriction Enzyme Buffer	7.9
		BSA	Not available.
		10X dNTP Mix	8
		Exo(-) Klenow	7.5
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
Melting point	:	<input checked="" type="checkbox"/> Nuclease Free Water	0°C (32°F)
		Random Primers	0°C (32°F)
		5X gDNA Reaction Buffer	0°C (32°F)
		Alu I	Not available.
		Rsa I	Not available.
		10X Restriction Enzyme Buffer	Not available.
		BSA	0°C (32°F)
		10X dNTP Mix	0°C (32°F)
		Exo(-) Klenow	Not available.
		Cyanine-3-dUTP	0°C (32°F)
		Cyanine-5-dUTP	0°C (32°F)
Boiling point	:	<input checked="" type="checkbox"/> Nuclease Free Water	100°C (212°F)
		Random Primers	100°C (212°F)
		5X gDNA Reaction Buffer	100°C (212°F)
		Alu I	Not available.
		Rsa I	Not available.
		10X Restriction Enzyme Buffer	Not available.
		BSA	100°C (212°F)
		10X dNTP Mix	100°C (212°F)
		Exo(-) Klenow	Not available.
		Cyanine-3-dUTP	100°C (212°F)
		Cyanine-5-dUTP	100°C (212°F)

Section 9. Physical and chemical properties

Flash point	:	<input checked="" type="checkbox"/> Nuclease Free Water	Not applicable.
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Alu I	Not available.
		Rsa I	Not available.
		10X Restriction Enzyme Buffer	Not available.
		BSA	Not available.
		10X dNTP Mix	Not available.
		Exo(-) Klenow	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Evaporation rate	:
Random Primers	Not available.		
5X gDNA Reaction Buffer	Not available.		
Alu I	Not available.		
Rsa I	Not available.		
10X Restriction Enzyme Buffer	Not available.		
BSA	Not available.		
10X dNTP Mix	Not available.		
Exo(-) Klenow	Not available.		
Cyanine-3-dUTP	Not available.		
Cyanine-5-dUTP	Not available.		
Flammability (solid, gas)	:		
		Random Primers	Not applicable.
		5X gDNA Reaction Buffer	Not applicable.
		Alu I	Not applicable.
		Rsa I	Not applicable.
		10X Restriction Enzyme Buffer	Not applicable.
		BSA	Not applicable.
		10X dNTP Mix	Not applicable.
		Exo(-) Klenow	Not applicable.
		Cyanine-3-dUTP	Not applicable.
		Cyanine-5-dUTP	Not applicable.
		Lower and upper explosive (flammable) limits	:
Random Primers	Not available.		
5X gDNA Reaction Buffer	Not available.		
Alu I	Not available.		
Rsa I	Not available.		
10X Restriction Enzyme Buffer	Not available.		
BSA	Not available.		
10X dNTP Mix	Not available.		
Exo(-) Klenow	Not available.		
Cyanine-3-dUTP	Not available.		
Cyanine-5-dUTP	Not available.		
Vapor pressure	:		
		Random Primers	Not available.
		5X gDNA Reaction Buffer	Not available.
		Alu I	Not available.
		Rsa I	Not available.
		10X Restriction Enzyme Buffer	Not available.
		BSA	Not available.
		10X dNTP Mix	Not available.
		Exo(-) Klenow	Not available.
		Cyanine-3-dUTP	Not available.
		Cyanine-5-dUTP	Not available.
		Vapor density	:

Section 9. Physical and chemical properties

	<ul style="list-style-type: none"> ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> 0.62 [Air = 1] Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Relative density	<ul style="list-style-type: none"> : ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> 1 Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Solubility	<ul style="list-style-type: none"> : ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	<ul style="list-style-type: none"> : ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> -1.38 Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature	<input checked="" type="checkbox"/> Nuclease Free Water	Not applicable.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Alu I	Not available.
	Rsa I	Not available.
	10X Restriction Enzyme Buffer	Not available.
	BSA	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
Decomposition temperature	<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Alu I	Not available.
	Rsa I	Not available.
	10X Restriction Enzyme Buffer	Not available.
	BSA	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.
Viscosity	<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
	Random Primers	Not available.
	5X gDNA Reaction Buffer	Not available.
	Alu I	Not available.
	Rsa I	Not available.
	10X Restriction Enzyme Buffer	Not available.
	BSA	Not available.
	10X dNTP Mix	Not available.
	Exo(-) Klenow	Not available.
	Cyanine-3-dUTP	Not available.
	Cyanine-5-dUTP	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	<input checked="" type="checkbox"/> Nuclease Free Water	No specific test data related to reactivity available for this product or its ingredients.
	Random Primers	No specific test data related to reactivity available for this product or its ingredients.
	5X gDNA Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	Alu I	No specific test data related to reactivity available for this product or its ingredients.
	Rsa I	No specific test data related to reactivity available for this product or its ingredients.
	10X Restriction Enzyme Buffer	No specific test data related to reactivity available for this product or its ingredients.
	BSA	No specific test data related to reactivity available for this product or its ingredients.
	10X dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	Exo(-) Klenow	No specific test data related to reactivity available for this product or its ingredients.
	Cyanine-3-dUTP	No specific test data related to reactivity available for this product or its ingredients.
	Cyanine-5-dUTP	No specific test data related to reactivity available for this product or its ingredients.

Section 10. Stability and reactivity

10.2 Chemical stability	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
10.5 Incompatible materials	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer 	<ul style="list-style-type: none"> May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.

Section 10. Stability and reactivity

BSA		materials. May react or be incompatible with oxidizing materials.
10X dNTP Mix		May react or be incompatible with oxidizing materials.
Exo(-) Klenow		May react or be incompatible with oxidizing materials.
Cyanine-3-dUTP		May react or be incompatible with oxidizing materials.
Cyanine-5-dUTP		May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	:	
	☒	Nuclease Free Water
Random Primers		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
5X gDNA Reaction Buffer		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Alu I		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Rsa I		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
10X Restriction Enzyme Buffer		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
BSA		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
10X dNTP Mix		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Exo(-) Klenow		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Cyanine-3-dUTP		Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Cyanine-5-dUTP		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
5X gDNA Reaction Buffer 2-Mercaptoethanol	LD50 Dermal LD50 Oral	Rabbit Rat	167.1 mg/kg 244 mg/kg	- -
Alu I Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Rsa I Glycerol Sodium chloride	LD50 Oral LD50 Oral	Rat Rat	12600 mg/kg 3000 mg/kg	- -
10X Restriction Enzyme Buffer Sodium chloride	LD50 Oral	Rat	3000 mg/kg	-
Exo(-) Klenow Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
5X gDNA Reaction Buffer 2-Mercaptoethanol	Eyes - Severe irritant	Rabbit	-	2 milligrams	-
Alu I Glycerol	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	24 hours 500 milligrams 24 hours 500 milligrams	- -
Rsa I Glycerol	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	24 hours 500 milligrams 24 hours 500 milligrams	- -
Sodium chloride	Eyes - Moderate irritant Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit Rabbit	- - -	24 hours 100 milligrams 10 milligrams 24 hours 500 milligrams	- - -
10X Restriction Enzyme Buffer Sodium chloride	Eyes - Moderate irritant Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit Rabbit	- - -	24 hours 100 milligrams 10 milligrams 24 hours 500 milligrams	- - -
Exo(-) Klenow Glycerol	Eyes - Mild irritant Skin - Mild irritant	Rabbit Rabbit	- -	24 hours 500 milligrams 24 hours 500 milligrams	- -

Sensitization

Not available.

Section 11. Toxicological information

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
5X gDNA Reaction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
2-Mercaptoethanol	Category 3	Not applicable.	Respiratory tract irritation
10X Restriction Enzyme Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Nuclease Free Water	Not available.
Random Primers	Not available.
5X gDNA Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
Alu I	Routes of entry anticipated: Oral, Dermal, Inhalation.
Rsa I	Routes of entry anticipated: Oral, Dermal, Inhalation.
10X Restriction Enzyme Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
BSA	Not available.
10X dNTP Mix	Not available.
Exo(-) Klenow	Routes of entry anticipated: Oral, Dermal, Inhalation.
Cyanine-3-dUTP	Not available.
Cyanine-5-dUTP	Not available.

Potential acute health effects

Eye contact

Nuclease Free Water	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
5X gDNA Reaction Buffer	No known significant effects or critical hazards.
Alu I	Causes eye irritation.
Rsa I	Causes serious eye irritation.
10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
BSA	No known significant effects or critical hazards.
10X dNTP Mix	No known significant effects or critical hazards.
Exo(-) Klenow	Causes eye irritation.
Cyanine-3-dUTP	No known significant effects or critical hazards.

Section 11. Toxicological information

	Cyanine-5-dUTP	No known significant effects or critical hazards.
Inhalation	: Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Skin contact	: Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	May cause an allergic skin reaction.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Ingestion	: Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Nuclease Free Water	No specific data.
	Random Primers	No specific data.
	5X gDNA Reaction Buffer	No specific data.
	Alu I	Adverse symptoms may include the following: irritation watering redness
	Rsa I	Adverse symptoms may include the following: pain or irritation watering redness
	10X Restriction Enzyme Buffer	No specific data.
	BSA	No specific data.
	10X dNTP Mix	No specific data.
	Exo(-) Klenow	Adverse symptoms may include the following: irritation watering redness
	Cyanine-3-dUTP	No specific data.
	Cyanine-5-dUTP	No specific data.

Section 11. Toxicological information

Inhalation	:	☑ Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Alu I	No specific data.
		Rsa I	No specific data.
		10X Restriction Enzyme Buffer	No specific data.
		BSA	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
Skin contact	:	☑ Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	Adverse symptoms may include the following: irritation redness
		Alu I	No specific data.
		Rsa I	No specific data.
		10X Restriction Enzyme Buffer	No specific data.
		BSA	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.
Ingestion	:	☑ Nuclease Free Water	No specific data.
		Random Primers	No specific data.
		5X gDNA Reaction Buffer	No specific data.
		Alu I	No specific data.
		Rsa I	No specific data.
		10X Restriction Enzyme Buffer	No specific data.
		BSA	No specific data.
		10X dNTP Mix	No specific data.
		Exo(-) Klenow	No specific data.
		Cyanine-3-dUTP	No specific data.
		Cyanine-5-dUTP	No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	☑ Nuclease Free Water	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		5X gDNA Reaction Buffer	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
		Alu I	No known significant effects or critical hazards.
		Rsa I	No known significant effects or critical hazards.
		10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
		BSA	No known significant effects or critical hazards.
		10X dNTP Mix	No known significant effects or critical hazards.

Section 11. Toxicological information

	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Carcinogenicity	: <input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Mutagenicity	: <input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Teratogenicity	: <input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Developmental effects	: <input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.
Fertility effects	: <input checked="" type="checkbox"/> Nuclease Free Water	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	5X gDNA Reaction Buffer	No known significant effects or critical hazards.
	Alu I	No known significant effects or critical hazards.
	Rsa I	No known significant effects or critical hazards.
	10X Restriction Enzyme Buffer	No known significant effects or critical hazards.
	BSA	No known significant effects or critical hazards.
	10X dNTP Mix	No known significant effects or critical hazards.
	Exo(-) Klenow	No known significant effects or critical hazards.
	Cyanine-3-dUTP	No known significant effects or critical hazards.
	Cyanine-5-dUTP	No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Rsa I Oral	172414.5 mg/kg
10X Restriction Enzyme Buffer Oral	103448.3 mg/kg

Other information

<input checked="" type="checkbox"/> Nuclease Free Water	Not available.
Random Primers	Not available.
5X gDNA Reaction Buffer	Adverse symptoms may include the following: May cause sensitization by skin contact.
Alu I	Not available.
Rsa I	Not available.
10X Restriction Enzyme Buffer	Not available.
BSA	Not available.
10X dNTP Mix	Not available.
Exo(-) Klenow	Not available.
Cyanine-3-dUTP	Not available.
Cyanine-5-dUTP	Not available.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Alu I Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Rsa I Glycerol Sodium chloride	Acute LC50 54000 mg/l Fresh water Acute EC50 4.74 g/L Fresh water Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Fish - Oncorhynchus mykiss Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 96 hours 96 hours 48 hours 48 hours 96 hours 96 hours 3 weeks 96 hours 21 days 8 weeks
10X Restriction Enzyme Buffer Sodium chloride	Acute EC50 4.74 g/L Fresh water Acute EC50 519.6 mg/l Fresh water Acute EC50 402600 µg/l Fresh water Acute IC50 6.87 g/L Fresh water Acute LC50 1000000 µg/l Fresh water Chronic LC10 781 mg/l Fresh water	Algae - Chlamydomonas reinhardtii Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Aquatic plants - Lemna minor Fish - Morone saxatilis - Larvae Crustaceans - Hyalella azteca -	96 hours 48 hours 48 hours 96 hours 96 hours 96 hours 3 weeks

Section 12. Ecological information

Exo(-) Klenow Glycerol	Chronic NOEC 6 g/L Fresh water Chronic NOEC 0.314 g/L Fresh water Chronic NOEC 100 mg/l Fresh water	Juvenile (Fledgling, Hatchling, Weanling) Aquatic plants - Lemna minor Daphnia - Daphnia pulex Fish - Gambusia holbrooki - Adult	96 hours 21 days 8 weeks
	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
5X gDNA Reaction Buffer 2-Mercaptoethanol	OECD 310 Ready Biodegradability - CO ₂ in Sealed Vessels (Headspace Test)	69 % - Inherent - 60 days	20 mg/l	-
Alu I Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Rsa I Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Exo(-) Klenow Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Nuclease Free Water Water	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Nuclease Free Water Water	-1.38	-	low
5X gDNA Reaction Buffer 2-Mercaptoethanol	-0.056	-	low
Alu I Glycerol	-1.76	-	low
Rsa I Glycerol	-1.76	-	low

Section 12. Ecological information

Exo(-) Klenow Glycerol	-1.76	-	low
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12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

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

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

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

Section 15. Regulatory information

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

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification	:	<ul style="list-style-type: none"> ☑ Nuclease Free Water Random Primers 5X gDNA Reaction Buffer Alu I Rsa I 10X Restriction Enzyme Buffer BSA 10X dNTP Mix Exo(-) Klenow Cyanine-3-dUTP Cyanine-5-dUTP 	<ul style="list-style-type: none"> Not applicable. Not applicable. SKIN SENSITIZATION - Category 1 EYE IRRITATION - Category 2B EYE IRRITATION - Category 2A Not applicable. Not applicable. Not applicable. EYE IRRITATION - Category 2B Not applicable. Not applicable.
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Composition/information on ingredients

Name	%	Classification
5X gDNA Reaction Buffer		
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≤5	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2-Mercaptoethanol	<1	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 2 ACUTE TOXICITY (inhalation) - Category 2 SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Alu I		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
Trisodium citrate	≤3	COMBUSTIBLE DUSTS
Rsa I		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A

Section 15. Regulatory information

Sodium chloride	≤3	EYE IRRITATION - Category 2A
10X Restriction Enzyme Buffer		
Sodium chloride	≤3	EYE IRRITATION - Category 2A
2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≤3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Exo(-) Klenow		
Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A

State regulations

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

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Europe** : Not determined.
- Japan** : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.
- Malaysia** : 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

History

Date of issue : 04/26/2018
Date of previous issue : 10/14/2016
Version : 4

Procedure used to derive the classification

Classification	Justification
5X gDNA Reaction Buffer SKIN SENSITIZATION - Category 1	Calculation method
Alu I EYE IRRITATION - Category 2B	Calculation method
Rsa I EYE IRRITATION - Category 2A	Calculation method
Exo(-) Klenow EYE IRRITATION - Category 2B	Calculation method

✔ Indicates information that has changed from previously issued version.

Notice to reader

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