Conforms to HPR 2015

SAFETY DATA SHEET

Agilent Technologies

AccuScript PfuUltra II RT-PCR Kit

Section 1. Identification

Product identifier : AccuScript PfuUltra II RT-PCR Kit

Part no. (chemical kit) : 600184

Part no. :

RNase-Free Water	600164-58
AccuScript High Fidelity RT	600184-52
10X AccuScript RT Reaction Buffer	600184-55
PfuUltra II HS DNA Polymerase	600184-51
10X PCR Reaction Buffer	600184-53
40 mM dNTP Mix (10 mM each dNTP)	600166-55
Oligo (dT) Primer	600166-54
Random Primers	600166-56
100 mM DTT	600184-54

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

Identified uses : Analytical reagent.

RNase-Free Water	3 x 1.2 ml
AccuScript High Fidelity RT	0.025 ml
10X AccuScript RT Reaction Buffer	0.05 ml
PfuUltra II HS DNA Polymerase	0.05 ml
10X PCR Reaction Buffer	1 ml
40 mM dNTP Mix (10 mM each dNTP)	0.1 ml
Oligo (dT) Primer	0.03 ml (3 µg 100 ng/µl)
Random Primers	0.03 ml (3 µg 100 ng/µl)
100 mM DTT	0.05 ml

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

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

AccuScript High Fidelity RT
H320 EYE IRRITATION - Category 2B

PfuUltra II HS DNA Polymerase
H320 EYE IRRITATION - Category 2B

GHS label elements

Signal word :

RNase-Free Water	No signal word.
AccuScript High Fidelity RT	Warning
10X AccuScript RT Reaction Buffer	No signal word.
PfuUltra II HS DNA Polymerase	Warning
10X PCR Reaction Buffer	No signal word.
40 mM dNTP Mix (10 mM	No signal word.

Section 2. Hazard identification

	each dNTP)	
	Oligo (dT) Primer	No signal word.
	Random Primers	No signal word.
	100 mM DTT	No signal word.
Hazard statements :	RNase-Free Water	No known significant effects or critical hazards.
	AccuScript High Fidelity RT	H320 - Causes eye irritation.
	10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
	PfuUltra II HS DNA Polymerase	H320 - Causes eye irritation.
	10X PCR Reaction Buffer	No known significant effects or critical hazards.
	40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
	Oligo (dT) Primer	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	100 mM DTT	No known significant effects or critical hazards.
Precautionary statements		
Prevention :	RNase-Free Water	Not applicable.
	AccuScript High Fidelity RT	Not applicable.
	10X AccuScript RT Reaction Buffer	Not applicable.
	PfuUltra II HS DNA Polymerase	Not applicable.
	10X PCR Reaction Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.
	100 mM DTT	Not applicable.
Response :	RNase-Free Water	Not applicable.
	AccuScript High Fidelity RT	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	10X AccuScript RT Reaction Buffer	Not applicable.
	PfuUltra II HS DNA Polymerase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
	10X PCR Reaction Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.
	100 mM DTT	Not applicable.
Storage :	RNase-Free Water	Not applicable.
	AccuScript High Fidelity RT	Not applicable.
	10X AccuScript RT Reaction Buffer	Not applicable.
	PfuUltra II HS DNA Polymerase	Not applicable.
	10X PCR Reaction Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
	Oligo (dT) Primer	Not applicable.

Section 2. Hazard identification

	Random Primers	Not applicable.
	100 mM DTT	Not applicable.
Disposal :	RNase-Free Water	Not applicable.
	AccuScript High Fidelity RT	Not applicable.
	10X AccuScript RT Reaction Buffer	Not applicable.
	PfuUltra II HS DNA Polymerase	Not applicable.
	10X PCR Reaction Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.
	100 mM DTT	Not applicable.
Supplemental label elements :	RNase-Free Water	None known.
	AccuScript High Fidelity RT	None known.
	10X AccuScript RT Reaction Buffer	None known.
	PfuUltra II HS DNA Polymerase	None known.
	10X PCR Reaction Buffer	None known.
	40 mM dNTP Mix (10 mM each dNTP)	None known.
	Oligo (dT) Primer	None known.
	Random Primers	None known.
	100 mM DTT	None known.
	10X PCR Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.8%
	40 mM dNTP Mix (10 mM each dNTP)	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5.7%
Other hazards which do not result in classification :	RNase-Free Water	None known.
	AccuScript High Fidelity RT	None known.
	10X AccuScript RT Reaction Buffer	None known.
	PfuUltra II HS DNA Polymerase	None known.
	10X PCR Reaction Buffer	None known.
	40 mM dNTP Mix (10 mM each dNTP)	None known.
	Oligo (dT) Primer	None known.
	Random Primers	None known.
	100 mM DTT	None known.

Section 3. Composition/information on ingredients

Substance/mixture :	RNase-Free Water	Substance
	AccuScript High Fidelity RT	Mixture
	10X AccuScript RT Reaction Buffer	Mixture
	PfuUltra II HS DNA Polymerase	Mixture
	10X PCR Reaction Buffer	Mixture
	40 mM dNTP Mix (10 mM each dNTP)	Mixture
	Oligo (dT) Primer	Mixture
	Random Primers	Mixture
	100 mM DTT	Mixture

Section 3. Composition/information on ingredients

Ingredient name	Synonyms	% (w/w)	CAS number
RNase-Free Water			
water	Water	100	7732-18-5
AccuScript High Fidelity RT			
Glycerol	Glycerol	≥30 - ≤60	56-81-5
10X AccuScript RT Reaction Buffer			
Potassium chloride	Potassium Chloride	≥5 - ≤10	7447-40-7
PfuUltra II HS DNA Polymerase			
Glycerol	Glycerol	≥30 - ≤60	56-81-5
10X PCR Reaction Buffer			
Trometamol	Tris	≥1 - ≤5	77-86-1
1-Propanaminium, 2-hydroxy-n,n-dimethyl-3-sulfo-n-3-(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-trihydroxy-24-oxocholan-24-ylaminopropyl-, inner salt	1-Propanaminium, 2-hydroxy-N,N-dimethyl-3-sulfo-N-3-(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-trihydroxy-24-oxocholan-24-ylaminopropyl-, inner salt	≥1 - ≤5	82473-24-3
1-O-Octyl-β-D-glucopyranoside	Octyl-β-glucoside	≥1 - ≤5	29836-26-8
100 mM DTT			
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	Dithiotreitol	≥1 - ≤5	3483-12-3

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact :

RNase-Free Water	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
AccuScript High Fidelity RT	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.
10X AccuScript RT Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.

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			Check for and remove any contact lenses. Get medical attention if irritation occurs.
		PfuUltra II HS DNA Polymerase	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.
		10X PCR Reaction Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		40 mM dNTP Mix (10 mM each dNTP)	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.
		Oligo (dT) Primer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
		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.
		100 mM DTT	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	:	RNase-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
		AccuScript High Fidelity RT	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 AccuScript RT Reaction 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.
		PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

Section 4. First-aid measures

			attention if symptoms occur. 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.
		40 mM dNTP Mix (10 mM each dNTP)	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.
		Oligo (dT) Primer	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.
		100 mM DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	RNase-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		AccuScript High Fidelity RT	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 AccuScript RT Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		40 mM dNTP Mix (10 mM each dNTP)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
		Oligo (dT) Primer	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.
		100 mM DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	RNase-Free Water	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
		AccuScript High Fidelity RT	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that

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	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.
10X AccuScript RT Reaction Buffer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
PfuUltra II HS DNA Polymerase	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
10X PCR Reaction Buffer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
40 mM dNTP Mix (10 mM each dNTP)	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Oligo (dT) Primer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Random Primers	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
100 mM DTT	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

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Eye contact	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	Causes eye irritation.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	Causes eye irritation.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Inhalation	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Skin contact	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Ingestion	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	Adverse symptoms may include the following: irritation watering redness
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	Adverse symptoms may include the following:

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			irritation watering redness
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	No specific data.
Inhalation	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	No specific data.
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	No specific data.
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	No specific data.
Skin contact	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	No specific data.
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	No specific data.
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	No specific data.
Ingestion	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	No specific data.
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	No specific data.
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	No specific data.

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

Notes to physician	:	RNase-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		AccuScript High Fidelity RT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		10X AccuScript RT 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.
		PfuUltra II HS DNA	Treat symptomatically. Contact poison treatment

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	Polymerase	specialist immediately if large quantities have been ingested or inhaled.
	10X PCR 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.
	40 mM dNTP Mix (10 mM each dNTP)	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.
	Oligo (dT) Primer	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.
	100 mM DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	RNase-Free Water	No specific treatment.
	AccuScript High Fidelity RT	No specific treatment.
	10X AccuScript RT Reaction Buffer	No specific treatment.
	PfuUltra II HS DNA Polymerase	No specific treatment.
	10X PCR Reaction Buffer	No specific treatment.
	40 mM dNTP Mix (10 mM each dNTP)	No specific treatment.
	Oligo (dT) Primer	No specific treatment.
	Random Primers	No specific treatment.
	100 mM DTT	No specific treatment.
Protection of first-aiders :	RNase-Free Water	No action shall be taken involving any personal risk or without suitable training.
	AccuScript High Fidelity RT	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 AccuScript RT Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
	PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
	40 mM dNTP Mix (10 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training.
	Oligo (dT) Primer	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.
	100 mM DTT	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: RNase-Free Water	Use an extinguishing agent suitable for the surrounding fire.
	AccuScript High Fidelity RT	Use an extinguishing agent suitable for the surrounding fire.
	10X AccuScript RT Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
	PfuUltra II HS DNA Polymerase	Use an extinguishing agent suitable for the surrounding fire.
	10X PCR Reaction Buffer	Use an extinguishing agent suitable for the surrounding fire.
	40 mM dNTP Mix (10 mM each dNTP)	Use an extinguishing agent suitable for the surrounding fire.
	Oligo (dT) Primer	Use an extinguishing agent suitable for the surrounding fire.
	Random Primers	Use an extinguishing agent suitable for the surrounding fire.
	100 mM DTT	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: RNase-Free Water	None known.
	AccuScript High Fidelity RT	None known.
	10X AccuScript RT Reaction Buffer	None known.
	PfuUltra II HS DNA Polymerase	None known.
	10X PCR Reaction Buffer	None known.
	40 mM dNTP Mix (10 mM each dNTP)	None known.
	Oligo (dT) Primer	None known.
	Random Primers	None known.
	100 mM DTT	None known.
Specific hazards arising from the chemical	: RNase-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	AccuScript High Fidelity RT	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X AccuScript RT Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	PfuUltra II HS DNA Polymerase	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X PCR Reaction Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	40 mM dNTP Mix (10 mM each dNTP)	In a fire or if heated, a pressure increase will occur and the container may burst.
	Oligo (dT) Primer	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.
	100 mM DTT	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: RNase-Free Water	No specific data.
	AccuScript High Fidelity RT	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X AccuScript RT Reaction Buffer	Decomposition products may include the following materials: carbon dioxide

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		carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	PfuUltra II HS DNA Polymerase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	10X PCR Reaction Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
	40 mM dNTP Mix (10 mM each dNTP)	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
	Oligo (dT) Primer	No specific data.
	Random Primers	No specific data.
	100 mM DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
Special protective actions for fire-fighters :	RNase-Free Water	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	AccuScript High Fidelity RT	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 AccuScript RT 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.
	PfuUltra II HS DNA Polymerase	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 PCR 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.
	40 mM dNTP Mix (10 mM each dNTP)	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.
	Oligo (dT) Primer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	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

Section 5. Fire-fighting measures

		without suitable training.
	100 mM DTT	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters :	RNase-Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AccuScript High Fidelity RT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10X AccuScript RT 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.
	PfuUltra II HS DNA Polymerase	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10X PCR 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.
	40 mM dNTP Mix (10 mM each dNTP)	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Oligo (dT) Primer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	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.
	100 mM DTT	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel :	RNase-Free Water	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	AccuScript High Fidelity RT	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 AccuScript RT Reaction	No action shall be taken involving any personal risk

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	Buffer	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.
	PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	40 mM dNTP Mix (10 mM each dNTP)	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.
	Oligo (dT) Primer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	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.
	100 mM DTT	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 :	RNase-Free Water	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	AccuScript High Fidelity RT	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 AccuScript RT 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".
	PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	If specialized clothing is required to deal with the

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		spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	40 mM dNTP Mix (10 mM each dNTP)	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".
	Oligo (dT) Primer	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	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".
	100 mM DTT	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".
Environmental precautions :	RNase-Free Water	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	AccuScript High Fidelity RT	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 AccuScript RT 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).
	PfuUltra II HS DNA Polymerase	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 PCR 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).
	40 mM dNTP Mix (10 mM each dNTP)	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).
	Oligo (dT) Primer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	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).

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	100 mM DTT	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up :	RNase-Free Water	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	AccuScript High Fidelity RT	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 AccuScript RT 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.
	PfuUltra II HS DNA Polymerase	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 PCR 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.
	40 mM dNTP Mix (10 mM each dNTP)	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.
	Oligo (dT) Primer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	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.
	100 mM DTT	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

Section 6. Accidental release measures

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	RNase-Free Water	Put on appropriate personal protective equipment (see Section 8).
		AccuScript High Fidelity RT	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 AccuScript RT Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
		PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
		40 mM dNTP Mix (10 mM each dNTP)	Put on appropriate personal protective equipment (see Section 8).
		Oligo (dT) Primer	Put on appropriate personal protective equipment (see Section 8).
		Random Primers	Put on appropriate personal protective equipment (see Section 8).
		100 mM DTT	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	RNase-Free Water	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
		AccuScript High Fidelity RT	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 AccuScript RT 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.
		PfuUltra II HS DNA Polymerase	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

		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 PCR 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.
	40 mM dNTP Mix (10 mM each dNTP)	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.
	Oligo (dT) Primer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	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.
	100 mM DTT	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities :	RNase-Free Water	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	AccuScript High Fidelity RT	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

Section 7. Handling and storage

	environmental contamination. See Section 10 for incompatible materials before handling or use.
10X AccuScript RT Reaction Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
PfuUltra II HS DNA Polymerase	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 PCR Reaction Buffer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
40 mM dNTP Mix (10 mM each dNTP)	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.
Oligo (dT) Primer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Random Primers	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

100 mM DTT	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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
AccuScript High Fidelity RT Glycerol	**CA Alberta Provincial (Canada, 3/2023).** OEL: 10 mg/m³ 8 hours. Form: Mist **CA Quebec Provincial (Canada, 9/2023).** TWAEV: 10 mg/m³ 8 hours. Form: mist **CA Saskatchewan Provincial (Canada, 4/2021).** STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist **CA British Columbia Provincial (Canada, 8/2023).** TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist
PfuUltra II HS DNA Polymerase Glycerol	**CA Alberta Provincial (Canada, 3/2023).** OEL: 10 mg/m³ 8 hours. Form: Mist **CA Quebec Provincial (Canada, 9/2023).** TWAEV: 10 mg/m³ 8 hours. Form: mist **CA Saskatchewan Provincial (Canada, 4/2021).** STEL: 20 mg/m³ 15 minutes. Form: mist TWA: 10 mg/m³ 8 hours. Form: mist **CA British Columbia Provincial (Canada, 8/2023).** TWA: 3 mg/m³ 8 hours. Form: respirable mist TWA: 10 mg/m³ 8 hours. Form: total mist

Biological exposure indices

No exposure indices known.

Section 8. Exposure controls/personal protection

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.

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 and safety characteristics

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

Appearance

Physical state :

RNase-Free Water	Liquid.
AccuScript High Fidelity RT	Liquid.
10X AccuScript RT Reaction Buffer	Liquid.
PfuUltra II HS DNA Polymerase	Liquid.
10X PCR Reaction Buffer	Liquid.
40 mM dNTP Mix (10 mM each dNTP)	Liquid.
Oligo (dT) Primer	Liquid.
Random Primers	Liquid.

Section 9. Physical and chemical properties and safety characteristics

		100 mM DTT	Liquid.
Color	:	RNase-Free Water	Colorless.
		AccuScript High Fidelity RT	Not available.
		10X AccuScript RT Reaction Buffer	Not available.
		PfuUltra II HS DNA Polymerase	Not available.
		10X PCR Reaction Buffer	Not available.
		40 mM dNTP Mix (10 mM each dNTP)	Not available.
		Oligo (dT) Primer	Not available.
		Random Primers	Not available.
		100 mM DTT	Not available.
Odor	:	RNase-Free Water	Odorless.
		AccuScript High Fidelity RT	Not available.
		10X AccuScript RT Reaction Buffer	Not available.
		PfuUltra II HS DNA Polymerase	Not available.
		10X PCR Reaction Buffer	Not available.
		40 mM dNTP Mix (10 mM each dNTP)	Not available.
		Oligo (dT) Primer	Not available.
		Random Primers	Not available.
		100 mM DTT	Not available.
Odor threshold	:	RNase-Free Water	Not available.
		AccuScript High Fidelity RT	Not available.
		10X AccuScript RT Reaction Buffer	Not available.
		PfuUltra II HS DNA Polymerase	Not available.
		10X PCR Reaction Buffer	Not available.
		40 mM dNTP Mix (10 mM each dNTP)	Not available.
		Oligo (dT) Primer	Not available.
		Random Primers	Not available.
		100 mM DTT	Not available.
pH	:	RNase-Free Water	7
		AccuScript High Fidelity RT	8
		10X AccuScript RT Reaction Buffer	8.3
		PfuUltra II HS DNA Polymerase	8.2
		10X PCR Reaction Buffer	10
		40 mM dNTP Mix (10 mM each dNTP)	7.5
		Oligo (dT) Primer	7.5
		Random Primers	7.5
		100 mM DTT	Not available.
Melting point/freezing point	:	RNase-Free Water	0°C (32°F)
		AccuScript High Fidelity RT	Not available.
		10X AccuScript RT Reaction Buffer	Not available.
		PfuUltra II HS DNA Polymerase	Not available.
		10X PCR Reaction Buffer	Not available.
		40 mM dNTP Mix (10 mM each dNTP)	Not available.

Section 9. Physical and chemical properties and safety characteristics

	Oligo (dT) Primer	0°C (32°F)
	Random Primers	0°C (32°F)
	100 mM DTT	0°C (32°F)
Boiling point, initial boiling point, and boiling range :	RNase-Free Water	100°C (212°F)
	AccuScript High Fidelity RT	Not available.
	10X AccuScript RT Reaction Buffer	Not available.
	PfuUltra II HS DNA Polymerase	Not available.
	10X PCR Reaction Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	Oligo (dT) Primer	100°C (212°F)
	Random Primers	100°C (212°F)
	100 mM DTT	100°C (212°F)

Flash point :

	Closed cup			Open cup		
Ingredient name	**°C**	**°F**	**Method**	**°C**	**°F**	**Method**
AccuScript High Fidelity RT						
Glycerol	-	-	-	177	350.6	-
PfuUltra II HS DNA Polymerase						
Glycerol	-	-	-	177	350.6	-
100 mM DTT						
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	>110	>230	-	-	-	-

Evaporation rate :	RNase-Free Water	Not available.
	AccuScript High Fidelity RT	Not available.
	10X AccuScript RT Reaction Buffer	Not available.
	PfuUltra II HS DNA Polymerase	Not available.
	10X PCR Reaction Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
	100 mM DTT	Not available.
Flammability :	RNase-Free Water	Not applicable.
	AccuScript High Fidelity RT	Not applicable.
	10X AccuScript RT Reaction Buffer	Not applicable.
	PfuUltra II HS DNA Polymerase	Not applicable.
	10X PCR Reaction Buffer	Not applicable.
	40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.

Section 9. Physical and chemical properties and safety characteristics

	100 mM DTT	Not applicable.
Lower and upper explosion limit/flammability limit :	RNase-Free Water	Not available.
	AccuScript High Fidelity RT	Not available.
	10X AccuScript RT Reaction Buffer	Not available.
	PfuUltra II HS DNA Polymerase	Not available.
	10X PCR Reaction Buffer	Not available.
	40 mM dNTP Mix (10 mM each dNTP)	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
	100 mM DTT	Not available.
Vapor pressure :	RNase-Free Water	2.3 kPa (17.5 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C (122°F)]

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
AccuScript High Fidelity RT						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
10X AccuScript RT Reaction Buffer						
water	17.5	2.3	-	92.258	12.3	-
PfuUltra II HS DNA Polymerase						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
10X PCR Reaction Buffer						
water	17.5	2.3	-	92.258	12.3	-
Trometamol	<0.00075006	<0.0001	-	-	-	-
40 mM dNTP Mix (10 mM each dNTP)						
water	17.5	2.3	-	92.258	12.3	-
Oligo (dT) Primer						

Section 9. Physical and chemical properties and safety characteristics

water	17.5	2.3	-	92.258	12.3	-
Random Primers						
water	17.5	2.3	-	92.258	12.3	-
100 mM DTT						
water	17.5	2.3	-	92.258	12.3	-

Relative vapor density :

RNase-Free Water	0.62 [Air = 1]
AccuScript High Fidelity RT	Not available.
10X AccuScript RT Reaction Buffer	Not available.
PfuUltra II HS DNA Polymerase	Not available.
10X PCR Reaction Buffer	Not available.
40 mM dNTP Mix (10 mM each dNTP)	Not available.
Oligo (dT) Primer	Not available.
Random Primers	Not available.
100 mM DTT	Not available.

Relative density :

RNase-Free Water	1
AccuScript High Fidelity RT	Not available.
10X AccuScript RT Reaction Buffer	Not available.
PfuUltra II HS DNA Polymerase	Not available.
10X PCR Reaction Buffer	Not available.
40 mM dNTP Mix (10 mM each dNTP)	Not available.
Oligo (dT) Primer	Not available.
Random Primers	Not available.
100 mM DTT	Not available.

Solubility(ies) :

Media	Result
RNase-Free Water	
water	Soluble
AccuScript High Fidelity RT	
water	Soluble
10X AccuScript RT Reaction Buffer	
water	Soluble
PfuUltra II HS DNA Polymerase	
water	Soluble
10X PCR Reaction Buffer	
water	Soluble
40 mM dNTP Mix (10 mM each dNTP)	
water	Soluble
Oligo (dT) Primer	
water	Soluble
Random Primers	
water	Soluble
100 mM DTT	
water	Soluble

Section 9. Physical and chemical properties and safety characteristics

Partition coefficient: n-octanol/water :

RNase-Free Water	-1.38
AccuScript High Fidelity RT	Not applicable.
10X AccuScript RT Reaction Buffer	Not applicable.
PfuUltra II HS DNA Polymerase	Not applicable.
10X PCR Reaction Buffer	Not applicable.
40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
Oligo (dT) Primer	Not applicable.
Random Primers	Not applicable.
100 mM DTT	Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
AccuScript High Fidelity RT			
Glycerol	370	698	-
PfuUltra II HS DNA Polymerase			
Glycerol	370	698	-

Decomposition temperature :

RNase-Free Water	Not available.
AccuScript High Fidelity RT	Not available.
10X AccuScript RT Reaction Buffer	Not available.
PfuUltra II HS DNA Polymerase	Not available.
10X PCR Reaction Buffer	Not available.
40 mM dNTP Mix (10 mM each dNTP)	Not available.
Oligo (dT) Primer	Not available.
Random Primers	Not available.
100 mM DTT	Not available.

Viscosity :

RNase-Free Water	Not available.
AccuScript High Fidelity RT	Not available.
10X AccuScript RT Reaction Buffer	Not available.
PfuUltra II HS DNA Polymerase	Not available.
10X PCR Reaction Buffer	Not available.
40 mM dNTP Mix (10 mM each dNTP)	Not available.
Oligo (dT) Primer	Not available.
Random Primers	Not available.
100 mM DTT	Not available.

Particle characteristics

Median particle size :

RNase-Free Water	Not applicable.
AccuScript High Fidelity RT	Not applicable.
10X AccuScript RT Reaction Buffer	Not applicable.
PfuUltra II HS DNA Polymerase	Not applicable.
10X PCR Reaction Buffer	Not applicable.
40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
Oligo (dT) Primer	Not applicable.

Section 9. Physical and chemical properties and safety characteristics

Random Primers	Not applicable.
100 mM DTT	Not applicable.

Section 10. Stability and reactivity

Reactivity :

RNase-Free Water	No specific test data related to reactivity available for this product or its ingredients.
AccuScript High Fidelity RT	No specific test data related to reactivity available for this product or its ingredients.
10X AccuScript RT Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
PfuUltra II HS DNA Polymerase	No specific test data related to reactivity available for this product or its ingredients.
10X PCR Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
40 mM dNTP Mix (10 mM each dNTP)	No specific test data related to reactivity available for this product or its ingredients.
Oligo (dT) Primer	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.
100 mM DTT	No specific test data related to reactivity available for this product or its ingredients.

Chemical stability :

RNase-Free Water	The product is stable.
AccuScript High Fidelity RT	The product is stable.
10X AccuScript RT Reaction Buffer	The product is stable.
PfuUltra II HS DNA Polymerase	The product is stable.
10X PCR Reaction Buffer	The product is stable.
40 mM dNTP Mix (10 mM each dNTP)	The product is stable.
Oligo (dT) Primer	The product is stable.
Random Primers	The product is stable.
100 mM DTT	The product is stable.

Possibility of hazardous reactions :

RNase-Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
AccuScript High Fidelity RT	Under normal conditions of storage and use, hazardous reactions will not occur.
10X AccuScript RT Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
PfuUltra II HS DNA Polymerase	Under normal conditions of storage and use, hazardous reactions will not occur.
10X PCR Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
40 mM dNTP Mix (10 mM each dNTP)	Under normal conditions of storage and use, hazardous reactions will not occur.
Oligo (dT) Primer	Under normal conditions of storage and use, hazardous reactions will not occur.
Random Primers	Under normal conditions of storage and use, hazardous reactions will not occur.
100 mM DTT	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid	: RNase-Free Water	No specific data.
	AccuScript High Fidelity RT	No specific data.
	10X AccuScript RT Reaction Buffer	No specific data.
	PfuUltra II HS DNA Polymerase	No specific data.
	10X PCR Reaction Buffer	No specific data.
	40 mM dNTP Mix (10 mM each dNTP)	No specific data.
	Oligo (dT) Primer	No specific data.
	Random Primers	No specific data.
	100 mM DTT	No specific data.
Incompatible materials	: RNase-Free Water	May react or be incompatible with oxidizing materials.
	AccuScript High Fidelity RT	May react or be incompatible with oxidizing materials.
	10X AccuScript RT Reaction Buffer	May react or be incompatible with oxidizing materials.
	PfuUltra II HS DNA Polymerase	May react or be incompatible with oxidizing materials.
	10X PCR Reaction Buffer	May react or be incompatible with oxidizing materials.
	40 mM dNTP Mix (10 mM each dNTP)	May react or be incompatible with oxidizing materials.
	Oligo (dT) Primer	May react or be incompatible with oxidizing materials.
	Random Primers	May react or be incompatible with oxidizing materials.
	100 mM DTT	May react or be incompatible with oxidizing materials.
Hazardous decomposition products	: RNase-Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	AccuScript High Fidelity RT	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X AccuScript RT Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	PfuUltra II HS DNA Polymerase	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	10X PCR Reaction Buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	40 mM dNTP Mix (10 mM each dNTP)	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Oligo (dT) Primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Random Primers	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	100 mM DTT	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
AccuScript High Fidelity RT				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
10X AccuScript RT Reaction Buffer				
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
PfuUltra II HS DNA Polymerase				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
10X PCR Reaction Buffer				
Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
AccuScript High Fidelity RT					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
10X AccuScript RT Reaction Buffer					
Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
PfuUltra II HS DNA Polymerase					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
10X PCR Reaction Buffer					
Trometamol	Skin - Moderate irritant	Rabbit	-	25 %	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
10X PCR Reaction Buffer			
Trometamol	Category 3	-	Respiratory tract irritation
1-Propanaminium, 2-hydroxy-n,n-dimethyl-3-sulfo-n-3-(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-trihydroxy-24-oxocholan-24-ylaminopropyl-, inner salt	Category 3	-	Respiratory tract irritation
1-O-Octyl-β-D-glucopyranoside	Category 3	-	Respiratory tract irritation
100 mM DTT			
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure :

RNase-Free Water	Not available.
AccuScript High Fidelity RT	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
10X AccuScript RT Reaction Buffer	Not available.
PfuUltra II HS DNA Polymerase	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
10X PCR Reaction Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
40 mM dNTP Mix (10 mM each dNTP)	Not available.
Oligo (dT) Primer	Not available.
Random Primers	Not available.
100 mM DTT	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact :

RNase-Free Water	No known significant effects or critical hazards.
AccuScript High Fidelity RT	Causes eye irritation.
10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
PfuUltra II HS DNA Polymerase	Causes eye irritation.
10X PCR Reaction Buffer	No known significant effects or critical hazards.
40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
Oligo (dT) Primer	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
100 mM DTT	No known significant effects or critical hazards.

Inhalation :

RNase-Free Water	No known significant effects or critical hazards.
AccuScript High Fidelity RT	No known significant effects or critical hazards.
10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
10X PCR Reaction Buffer	No known significant effects or critical hazards.
40 mM dNTP Mix (10 mM	No known significant effects or critical hazards.

Section 11. Toxicological information

		each dNTP)	
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Skin contact	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Ingestion	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	Adverse symptoms may include the following: irritation watering redness
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	Adverse symptoms may include the following: irritation watering redness
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	No specific data.
Inhalation	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	No specific data.
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	No specific data.
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.

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		Random Primers	No specific data.
		100 mM DTT	No specific data.
Skin contact	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	No specific data.
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	No specific data.
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	No specific data.
Ingestion	:	RNase-Free Water	No specific data.
		AccuScript High Fidelity RT	No specific data.
		10X AccuScript RT Reaction Buffer	No specific data.
		PfuUltra II HS DNA Polymerase	No specific data.
		10X PCR Reaction Buffer	No specific data.
		40 mM dNTP Mix (10 mM each dNTP)	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		100 mM DTT	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	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Carcinogenicity	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.

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		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Mutagenicity	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.
Reproductive toxicity	:	RNase-Free Water	No known significant effects or critical hazards.
		AccuScript High Fidelity RT	No known significant effects or critical hazards.
		10X AccuScript RT Reaction Buffer	No known significant effects or critical hazards.
		PfuUltra II HS DNA Polymerase	No known significant effects or critical hazards.
		10X PCR Reaction Buffer	No known significant effects or critical hazards.
		40 mM dNTP Mix (10 mM each dNTP)	No known significant effects or critical hazards.
		Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		100 mM DTT	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
AccuScript High Fidelity RT					
Glycerol	12600	N/A	N/A	N/A	N/A
10X AccuScript RT Reaction Buffer					
10X AccuScript RT Reaction Buffer	46428.6	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A
PfuUltra II HS DNA Polymerase					
Glycerol	12600	N/A	N/A	N/A	N/A
10X PCR Reaction Buffer					
10X PCR Reaction Buffer	258181.8	N/A	N/A	N/A	N/A
100 mM DTT					
100 mM DTT	32467.5	N/A	N/A	N/A	N/A
(R*,R*)-1,4-Dimercaptobutane-2,3-diol	500	N/A	N/A	N/A	N/A

Other information	:	100 mM DTT	Adverse symptoms may include the following: May cause skin sensitization.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
AccuScript High Fidelity RT			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - *Oncorhynchus mykiss*	96 hours
10X AccuScript RT Reaction Buffer			
Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - *Desmodesmus subspicatus*	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - *Navicula seminulum*	96 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - *Pseudosida ramosa* - Neonate	48 hours
	Acute LC50 93000 µg/l Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - *Danio rerio*	96 hours
PfuUltra II HS DNA Polymerase			
Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - *Oncorhynchus mykiss*	96 hours
10X PCR Reaction Buffer			
Trometamol	Acute EC50 >980 mg/l Fresh water	Daphnia	48 hours
	Acute NOEC 520 mg/l Fresh water	Daphnia	48 hours
100 mM DTT			
(R*,R*) -1,4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - *Daphnia magna*	48 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
AccuScript High Fidelity RT				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
PfuUltra II HS DNA Polymerase				
Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
10X PCR Reaction Buffer				
Trometamol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	97.1 % - Readily - 28 days	30 mg/l	-

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RNase-Free Water			
water	-	-	Readily
10X AccuScript RT Reaction Buffer			
Potassium chloride	-	-	Readily
10X PCR Reaction Buffer			
Trometamol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
RNase-Free Water			
water	-1.38	-	Low
AccuScript High Fidelity RT			
Glycerol	-1.76	-	Low
10X AccuScript RT Reaction Buffer			
Potassium chloride	-0.46	-	Low
PfuUltra II HS DNA Polymerase			
Glycerol	-1.76	-	Low
10X PCR Reaction Buffer			
Trometamol	-2.31	-	Low

Mobility in soil

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

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

Section 13. Disposal considerations

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

Section 14. Transport information

TDG / 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 IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada : Not determined.

United States : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 10/28/2024

Date of previous issue : 09/27/2021

Version : 7

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

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
AccuScript High Fidelity RT EYE IRRITATION - Category 2B	Calculation method
PfuUltra II HS DNA Polymerase EYE IRRITATION - Category 2B	Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

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