

# SAFETY DATA SHEET



AccuScript PfuUltra II RT-PCR Kit, Part Number 600184

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

### 1.1 Product identifier

<b>Product name</b>	: AccuScript PfuUltra II RT-PCR Kit, Part Number 600184
<b>Part No. (Kit)</b>	: 600184
<b>Part No.</b>	: 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

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

Identified uses	
Analytical reagent.	
RNase-Free Water	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

### 1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

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

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

<b>Product definition</b>	: RNase-Free Water	Mono-constituent 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

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

Not classified.

<b>Ingredients of unknown toxicity</b>	: 10X AccuScript RT Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 7.9%
	10X PCR Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.8%
	40 mM dNTP Mix (10 mM each dNTP)	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5.7%
<b>Ingredients of unknown ecotoxicity</b>	: 10X AccuScript RT Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.9%
	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%

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

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

**2.2 Label elements**

<b>Signal word</b>	: RNase-Free Water	No signal word.
	AccuScript High Fidelity RT	No signal word.
	10X AccuScript RT Reaction Buffer	No signal word.
	PfuUltra II HS DNA Polymerase	No signal word.
	10X PCR Reaction Buffer	No signal word.
	40 mM dNTP Mix (10 mM each dNTP)	No signal word.
	Oligo (dT) Primer	No signal word.
	Random Primers	No signal word.
	100 mM DTT	No signal word.
<b>Hazard statements</b>	: 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.

**Precautionary statements**

**SECTION 2: Hazards identification**

<b>Prevention</b>	: RNase-Free Water AccuScript High Fidelity RT 10X AccuScript RT Reaction Buffer PfuUltra II HS DNA Polymerase 10X PCR Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) Oligo (dT) Primer Random Primers 100 mM DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Response</b>	: RNase-Free Water AccuScript High Fidelity RT 10X AccuScript RT Reaction Buffer PfuUltra II HS DNA Polymerase 10X PCR Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) Oligo (dT) Primer Random Primers 100 mM DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Storage</b>	: RNase-Free Water AccuScript High Fidelity RT 10X AccuScript RT Reaction Buffer PfuUltra II HS DNA Polymerase 10X PCR Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) Oligo (dT) Primer Random Primers 100 mM DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: RNase-Free Water AccuScript High Fidelity RT 10X AccuScript RT Reaction Buffer PfuUltra II HS DNA Polymerase 10X PCR Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) Oligo (dT) Primer Random Primers 100 mM DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Hazardous ingredients</b>	: 10X AccuScript RT Reaction Buffer 10X PCR Reaction Buffer 100 mM DTT	Not applicable. Not applicable. Not applicable.

## SECTION 2: Hazards identification

<b>Supplemental label elements</b>	:	RNase-Free Water	Not applicable.
		AccuScript High Fidelity RT	Not applicable.
		10X AccuScript RT Reaction Buffer	Safety data sheet available on request.
		PfuUltra II HS DNA Polymerase	Not applicable.
		10X PCR Reaction Buffer	Safety data sheet available on request.
		40 mM dNTP Mix (10 mM each dNTP)	Not applicable.
		Oligo (dT) Primer	Not applicable.
		Random Primers	Not applicable.
		100 mM DTT	Safety data sheet available on request.
	<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	:	RNase-Free Water
		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.

### Special packaging requirements

<b>Tactile warning of danger</b>	:	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.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	:	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

<b>3.1 Substances</b>	:	RNase-Free Water	Mono-constituent 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

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>RNase-Free Water</b> Water	EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[A]
<b>AccuScript High Fidelity RT</b> Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
<b>10X AccuScript RT Reaction Buffer</b> 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	<10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
<b>PfuUltra II HS DNA Polymerase</b> Glycerol	EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
<b>10X PCR Reaction Buffer</b> Trometamol	EC: 201-064-4 CAS: 77-86-1	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[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	CAS: 82473-24-3	≤2.6	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
<b>100 mM DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	EC: 222-468-7 CAS: 3483-12-3	≤3	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

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.

### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

## SECTION 3: Composition/information on ingredients

[A] Constituent

[B] Impurity

[C] Stabilising additive

## SECTION 4: First aid measures

### 4.1 Description of 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. Get medical attention if irritation occurs.

10X AccuScript RT 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.

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. Get medical attention if irritation occurs.

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. Get medical attention if symptoms occur.

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. Get medical attention if symptoms occur.

10X PCR 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.

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.

**SECTION 4: First aid measures**

	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.
<b>Skin contact</b>	: 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.
	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.
	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.
<b>Ingestion</b>	: RNase-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.
	AccuScript High Fidelity RT	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.
	10X AccuScript RT Reaction Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	PfuUltra II HS DNA Polymerase	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.
	10X PCR Reaction Buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	40 mM dNTP Mix (10	Wash out mouth with water. Remove victim to fresh air and

**SECTION 4: First aid measures**

mM each dNTP)	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.
Oligo (dT) Primer	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.
100 mM DTT	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.

**Protection of first-aiders** : RNase-Free Water

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.
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.
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.

**4.2 Most important symptoms and effects, both acute and delayed**

**Potential acute health effects**

<b>Eye contact</b>	: 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.



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<b>Inhalation</b>	:	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.
	<b>Skin contact</b>	:	RNase-Free Water
		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.
<b>Ingestion</b>		:	RNase-Free Water
		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**

<b>Eye contact</b>	:	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.
	<b>Inhalation</b>	:	RNase-Free Water
		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.

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	Oligo (dT) Primer	No specific data.
	Random Primers	No specific data.
	100 mM DTT	No specific data.
<b>Skin contact</b>	: 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.
<b>Ingestion</b>	: 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.

**4.3 Indication of any immediate medical attention and special treatment needed**

<b>Notes to physician</b>	: 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 Polymerase	Treat symptomatically. Contact poison treatment 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.
<b>Specific treatments</b>	: 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.

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Random Primers	No specific treatment.
100 mM DTT	No specific treatment.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: 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.
	<b>Unsuitable extinguishing media</b>	: RNase-Free Water
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.

**5.2 Special hazards arising from the substance or mixture**

<b>Hazards from the substance or mixture</b>	: 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.
	<b>Hazardous combustion products</b>	: RNase-Free Water
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 carbon monoxide nitrogen oxides halogenated compounds

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PfuUltra II HS DNA Polymerase	metal oxide/oxides Decomposition products may include the following materials:
10X PCR Reaction Buffer	carbon dioxide carbon monoxide 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

**5.3 Advice for firefighters**

**Special precautions 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 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a

## SECTION 5: Firefighting measures

10X AccuScript RT Reaction Buffer	basic level of protection for chemical incidents. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: 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 spilt 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 spilt material. Put on appropriate personal protective equipment.
	10X AccuScript RT 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 spilt 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.

**SECTION 6: Accidental release measures**

		Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. 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.
<b>For emergency responders</b>	: RNase-Free Water	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	AccuScript High Fidelity RT	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10X AccuScript RT Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	PfuUltra II HS DNA Polymerase	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	10X PCR Reaction Buffer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	40 mM dNTP Mix (10 mM each dNTP)	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Oligo (dT) Primer	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Random Primers	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	100 mM DTT	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**SECTION 6: Accidental release measures****6.2 Environmental precautions**

: RNase-Free Water	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
AccuScript High Fidelity RT	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
10X AccuScript RT Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
PfuUltra II HS DNA Polymerase	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
10X PCR Reaction Buffer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
40 mM dNTP Mix (10 mM each dNTP)	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Oligo (dT) Primer	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Random Primers	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
100 mM DTT	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**6.3 Methods and material for containment and cleaning up****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

## SECTION 6: Accidental release measures

40 mM dNTP Mix (10 mM each dNTP)	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.
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 disposal container. Dispose of via a licensed waste disposal contractor.

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

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	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).
	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).
	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).
<b>Advice on general occupational hygiene</b>	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 7: Handling and storage

PfuUltra II HS DNA Polymerase	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.
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.

### 7.2 Conditions for safe storage, including any incompatibilities

<b>Storage</b>	: 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 unlabelled containers. Use

**SECTION 7: Handling and storage**

PfuUltra II HS DNA Polymerase	appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
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 incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
100 mM DTT	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

**7.3 Specific end use(s)**

## SECTION 7: Handling and storage

<b>Recommendations</b>	: RNase-Free Water AccuScript High Fidelity RT 10X AccuScript RT Reaction Buffer PfuUltra II HS DNA Polymerase 10X PCR Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) Oligo (dT) Primer Random Primers 100 mM DTT	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.
<b>Industrial sector specific solutions</b>	: RNase-Free Water AccuScript High Fidelity RT 10X AccuScript RT Reaction Buffer PfuUltra II HS DNA Polymerase 10X PCR Reaction Buffer 40 mM dNTP Mix (10 mM each dNTP) Oligo (dT) Primer Random Primers 100 mM DTT	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>AccuScript High Fidelity RT</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>PfuUltra II HS DNA Polymerase</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**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: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	: 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.
	100 mM DTT	Liquid.
	<b>Colour</b>	: RNase-Free Water
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.

**SECTION 9: Physical and chemical properties**

	100 mM DTT	Not available.
<b>Odour</b>	: RNase-Free Water	Odourless.
	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.
<b>Odour threshold</b>	: 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.
<b>pH</b>	: 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.
<b>Melting point/freezing point</b>	: RNase-Free Water	0°C
	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	0°C
	Random Primers	0°C
	100 mM DTT	0°C

**SECTION 9: Physical and chemical properties**

<b>Initial boiling point and boiling range</b>	:	RNase-Free Water	100°C	
		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	
		Random Primers	100°C	
		100 mM DTT	100°C	
	<b>Flash point</b>	:	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.	
<b>Evaporation rate</b>		:	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.	
	<b>Flammability (solid, gas)</b>	:	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.	

**SECTION 9: Physical and chemical properties**

<b>Upper/lower flammability or explosive limits</b>	<b>:</b>	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.
	<b>Vapour pressure</b>	<b>:</b>	RNase-Free Water
		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.
<b>Vapour density</b>		<b>:</b>	RNase-Free Water
		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.
	<b>Relative density</b>	<b>:</b>	RNase-Free Water
		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.

**SECTION 9: Physical and chemical properties**

<b>Solubility(ies)</b>	: RNase-Free Water	Easily soluble in the following materials: cold water and hot water.
	AccuScript High Fidelity RT	Soluble in the following materials: cold water and hot water.
	10X AccuScript RT Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
	PfuUltra II HS DNA Polymerase	Soluble in the following materials: cold water and hot water.
	10X PCR Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
	40 mM dNTP Mix (10 mM each dNTP)	Easily soluble in the following materials: cold water and hot water.
	Oligo (dT) Primer	Easily soluble in the following materials: cold water and hot water.
	Random Primers	Easily soluble in the following materials: cold water and hot water.
	100 mM DTT	Easily soluble in the following materials: cold water and hot water.
	<b>Partition coefficient: n-octanol/water</b>	: RNase-Free Water
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.
<b>Auto-ignition temperature</b>		: RNase-Free Water
	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.
	<b>Decomposition temperature</b>	: RNase-Free Water
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.



**SECTION 9: Physical and chemical properties**

<b>Viscosity</b>	: 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.	
	<b>Explosive properties</b>	: 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.	
<b>Oxidising properties</b>		: 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.	

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: 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

**SECTION 10: Stability and reactivity**

100 mM DTT product or its ingredients.  
No specific test data related to reactivity available for this product or its ingredients.

**10.2 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.

**10.3 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.

**10.4 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.

**10.5 Incompatible materials**

: RNase-Free Water May react or be incompatible with oxidising materials.  
AccuScript High Fidelity RT May react or be incompatible with oxidising materials.  
10X AccuScript RT Reaction Buffer May react or be incompatible with oxidising materials.  
PfuUltra II HS DNA Polymerase May react or be incompatible with oxidising materials.  
10X PCR Reaction Buffer May react or be incompatible with oxidising materials.  
40 mM dNTP Mix (10 mM each dNTP) May react or be incompatible with oxidising materials.  
Oligo (dT) Primer May react or be incompatible with oxidising materials.  
Random Primers May react or be incompatible with oxidising materials.

## SECTION 10: Stability and reactivity

100 mM DTT May react or be incompatible with oxidising materials.

### 10.6 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

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
10X PCR Reaction Buffer Trometamol	LD50 Dermal	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

#### Acute toxicity estimates

Route	ATE value
100 mM DTT Oral	32467.5 mg/kg

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
10X PCR Reaction Buffer Trometamol	Skin - Moderate irritant	Rabbit	-	25 Percent	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-

#### Sensitiser

Conclusion/Summary : Not available.

#### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
10X AccuScript RT Reaction Buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
10X PCR Reaction Buffer Trometamol	Category 3	Not applicable.	Respiratory tract irritation
	Category 3	Not applicable.	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	Not applicable.	Respiratory tract irritation
100 mM DTT (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation

**SECTION 11: Toxicological information****Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure**

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

**Potential acute health effects****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.

**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.

**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.

**SECTION 11: Toxicological information**

<b>Eye contact</b>	:	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**

<b>Inhalation</b>	:	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.

<b>Ingestion</b>	:	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.

<b>Skin contact</b>	:	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.

<b>Eye contact</b>	:	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.

**SECTION 11: Toxicological information**

Oligo (dT) Primer	No specific data.
Random Primers	No specific data.
100 mM DTT	No specific data.

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

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**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.  
 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.

## SECTION 11: Toxicological information

<b>Teratogenicity</b>	:	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.
	<b>Developmental effects</b>	:	RNase-Free Water
		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.
<b>Fertility effects</b>		:	RNase-Free Water
		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.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>10X PCR Reaction Buffer</b> Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours
<b>100 mM DTT</b> (R*,R*)-1, 4-Dimercaptobutane-2,3-diol	Acute LC50 27000 to 30000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>RNase-Free Water</b> Water	-	100 % - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
<b>RNase-Free Water</b> Water	-	-	Readily	

**SECTION 12: Ecological information****12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>RNase-Free Water</b> Water	-1.38	-	low
<b>10X PCR Reaction Buffer</b> Trometamol	-1.56	-	low

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

**PBT** : Not applicable.

**vPvB** : Not applicable.

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

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

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

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**Packaging**

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

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SECTION 14: Transport information****Regulatory information**

**ADR/RID / IMDG / IATA** : Not regulated.

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

**14.7 Transport in bulk according to 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

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

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	<b>:</b> 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.

#### Other EU regulations

**Europe inventory** : Not determined.

#### Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### 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.

#### International lists

##### National inventory

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : All components are listed or exempted. <b>Japan inventory (ISHL)</b> : All components are listed or exempted.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.

## SECTION 15: Regulatory information

<b>Taiwan</b>	: All components are listed or exempted.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.

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

## SECTION 16: Other information

 Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number

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

Classification	Justification
Not classified.	

### Full text of abbreviated H statements

<b>10X AccuScript RT Reaction Buffer</b> H315 H319 H335  <b>10X PCR Reaction Buffer</b> H315 H319 H335  <b>100 mM DTT</b> H302 H315 H319 H335 H412	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.  Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.  Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
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### Full text of classifications [CLP/GHS]

<b>10X AccuScript RT Reaction Buffer</b> Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335  <b>10X PCR Reaction Buffer</b> Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335  <b>100 mM DTT</b> Acute Tox. 4, H302 Aquatic Chronic 3, H412 Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3  SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3  ACUTE TOXICITY (oral) - Category 4 LONG-TERM AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
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**Date of issue/ Date of revision** : 25/11/2016

**Date of issue/Date of revision** : 25/11/2016

## SECTION 16: Other information

**Date of previous issue** : No previous validation.

**Version** : 1

### Notice to reader

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