

# SAFETY DATA SHEET



FairPlay III Microarray Labeling Kit, Part Number 252012

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

### 1.1 Product identifier

<b>Product name</b>	: FairPlay III Microarray Labeling Kit, Part Number 252012	
<b>Part No. (Kit)</b>	: 252012	
<b>Part No.</b>	:	DMSO (high purity) 252003-510
		DEPC Water 252003-55
		10X AffinityScript 252003-52
		Reaction Buffer
		20X dNTP Mix With 252003-56
		Amino Alkyl dUTP
		Oligo (dT) Primer (12-18) 252003-53
		Random Primers 252009-53
		0.1 M DTT 252003-54
		RNase block 252003-57
		AffinityScript HC 252012-51
		Reverse Transcriptase
		Glycogen 252003-59
		2X Coupling Buffer 252003-58
		DNA-Binding Solution 400771-13

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

#### Identified uses

Analytical reagent.	
DMSO (high purity)	1.5 ml
DEPC Water	1.5 ml
10X AffinityScript Reaction Buffer	0.15 ml
20X dNTP Mix With Amino Alkyl dUTP	0.03 ml
Oligo (dT) Primer (12-18)	0.06 ml (60 µl 500 ng/µl)
Random Primers	0.03 ml (30 µl 500 ng/µl)
0.1 M DTT	0.09 ml
RNase block	0.015 ml (600 U 40 U/µl)
AffinityScript HC Reverse Transcriptase	0.09 ml
Glycogen	0.03 ml (30 µl 20 µg/µl)
2X Coupling Buffer	0.3 ml
DNA-Binding Solution	2 x 5 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>	:	DMSO (high purity)	Mono-constituent substance
		DEPC Water	Mono-constituent substance
		10X AffinityScript Reaction Buffer	Mixture
		20X dNTP Mix With Amino Allyl dUTP	Mixture
		Oligo (dT) Primer (12-18)	Mixture
		Random Primers	Mixture
		0.1 M DTT	Mixture
		RNase block	Mixture
		AffinityScript HC Reverse Transcriptase	Mixture
		Glycogen	Mixture
		2X Coupling Buffer	Mixture
		DNA-Binding Solution	Mixture

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

#### DNA-Binding Solution

H302	ACUTE TOXICITY (oral) - Category 4
H332	ACUTE TOXICITY (inhalation) - Category 4
H412	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3

<b>Ingredients of unknown toxicity</b>	:	10X AffinityScript Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
		0.1 M DTT	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
		RNase block	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
		AffinityScript HC Reverse Transcriptase	Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 30 - 60%
		Glycogen	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10%
		DNA-Binding Solution	Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 1 - 10% Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 1 - 10%
<b>Ingredients of unknown ecotoxicity</b>	:	10X AffinityScript Reaction Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 7.9%
		Glycogen	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2%
		DNA-Binding Solution	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.6%

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

## SECTION 2: Hazards identification

**Hazard pictograms** : DNA-Binding Solution



**Signal word** : DMSO (high purity) No signal word.  
DEPC Water No signal word.  
10X AffinityScript No signal word.  
Reaction Buffer  
20X dNTP Mix With No signal word.  
Amino Allyl dUTP  
Oligo (dT) Primer (12-18) No signal word.  
Random Primers No signal word.  
0.1 M DTT No signal word.  
RNase block No signal word.  
AffinityScript HC No signal word.  
Reverse Transcriptase  
Glycogen No signal word.  
2X Coupling Buffer No signal word.  
DNA-Binding Solution Warning

**Hazard statements** : DMSO (high purity) No known significant effects or critical hazards.  
DEPC Water No known significant effects or critical hazards.  
10X AffinityScript No known significant effects or critical hazards.  
Reaction Buffer  
20X dNTP Mix With No known significant effects or critical hazards.  
Amino Allyl dUTP  
Oligo (dT) Primer (12-18) No known significant effects or critical hazards.  
Random Primers No known significant effects or critical hazards.  
0.1 M DTT No known significant effects or critical hazards.  
RNase block No known significant effects or critical hazards.  
AffinityScript HC No known significant effects or critical hazards.  
Reverse Transcriptase  
Glycogen No known significant effects or critical hazards.  
2X Coupling Buffer No known significant effects or critical hazards.  
DNA-Binding Solution H302 + H332 - Harmful if swallowed or if inhaled.  
H412 - Harmful to aquatic life with long lasting effects.

### Precautionary statements

**Prevention** : DMSO (high purity) Not applicable.  
DEPC Water Not applicable.  
10X AffinityScript Not applicable.  
Reaction Buffer  
20X dNTP Mix With Not applicable.  
Amino Allyl dUTP  
Oligo (dT) Primer (12-18) Not applicable.  
Random Primers Not applicable.  
0.1 M DTT Not applicable.  
RNase block Not applicable.  
AffinityScript HC Not applicable.  
Reverse Transcriptase  
Glycogen Not applicable.  
2X Coupling Buffer Not applicable.  
DNA-Binding Solution P271 - Use only outdoors or in a well-ventilated area.  
P273 - Avoid release to the environment.  
P261 - Avoid breathing vapour.

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**SECTION 2: Hazards identification**

<b>Response</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
<b>Storage</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Disposal</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: 10X AffinityScript Reaction Buffer 0.1 M DTT 2X Coupling Buffer DNA-Binding Solution	Not applicable. Not applicable. Not applicable. Not applicable. - salts of thiocyanic acid
<b>Supplemental label elements</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers	Not applicable. Not applicable. Safety data sheet available on request. Not applicable. Not applicable. Not applicable.

## SECTION 2: Hazards identification

	0.1 M DTT	Safety data sheet available on request.
	RNase block	Not applicable.
	AffinityScript HC	Not applicable.
	Reverse Transcriptase	
	Glycogen	Not applicable.
	2X Coupling Buffer	Safety data sheet available on request.
	DNA-Binding Solution	Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	DMSO (high purity)	Not applicable.
	DEPC Water	Not applicable.
	10X AffinityScript	Not applicable.
	Reaction Buffer	
	20X dNTP Mix With	Not applicable.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	Not applicable.
	Random Primers	Not applicable.
	0.1 M DTT	Not applicable.
	RNase block	Not applicable.
	AffinityScript HC	Not applicable.
	Reverse Transcriptase	
	Glycogen	Not applicable.
	2X Coupling Buffer	Not applicable.
	DNA-Binding Solution	Not applicable.

### Special packaging requirements

<b>Tactile warning of danger</b>	DMSO (high purity)	Not applicable.
	DEPC Water	Not applicable.
	10X AffinityScript	Not applicable.
	Reaction Buffer	
	20X dNTP Mix With	Not applicable.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	Not applicable.
	Random Primers	Not applicable.
	0.1 M DTT	Not applicable.
	RNase block	Not applicable.
	AffinityScript HC	Not applicable.
	Reverse Transcriptase	
	Glycogen	Not applicable.
	2X Coupling Buffer	Not applicable.
	DNA-Binding Solution	Not applicable.

### 2.3 Other hazards

<b>Other hazards which do not result in classification</b>	DMSO (high purity)	None known.
	DEPC Water	None known.
	10X AffinityScript	None known.
	Reaction Buffer	
	20X dNTP Mix With	None known.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	None known.
	Random Primers	None known.
	0.1 M DTT	None known.
	RNase block	None known.
	AffinityScript HC	None known.
	Reverse Transcriptase	
	Glycogen	None known.
	2X Coupling Buffer	None known.
	DNA-Binding Solution	None known.

## SECTION 3: Composition/information on ingredients

<b>3.1 Substances</b>	:	DMSO (high purity)	Mono-constituent substance
		DEPC Water	Mono-constituent substance
		10X AffinityScript Reaction Buffer	Mixture
		20X dNTP Mix With Amino Allyl dUTP	Mixture
		Oligo (dT) Primer (12-18)	Mixture
		Random Primers	Mixture
		0.1 M DTT	Mixture
		RNase block	Mixture
		AffinityScript HC Reverse Transcriptase	Mixture
		Glycogen	Mixture
		2X Coupling Buffer	Mixture
		DNA-Binding Solution	Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>DMSO (high purity)</b> Dimethyl sulfoxide	EC: 200-664-3 CAS: 67-68-5	100	Not classified.	[A]
<b>DEPC Water</b> Water	REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[A]
<b>10X AffinityScript 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>0.1 M 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	[1]
<b>RNase block</b> Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
<b>AffinityScript HC Reverse Transcriptase</b> Glycerol	REACH #: Annex V EC: 200-289-5 CAS: 56-81-5	≥50 - ≤75	Not classified.	[2]
<b>2X Coupling Buffer</b> Borax (B <sub>4</sub> Na <sub>2</sub> O <sub>7</sub> ·10H <sub>2</sub> O)	EC: 215-540-4 CAS: 1303-96-4 Index: 005-011-01-1	≤3	Repr. 1B, H360FD (Fertility and Unborn child)	[1]
<b>DNA-Binding Solution</b> Guanidinium thiocyanate	EC: 209-812-1 CAS: 593-84-0 Index: 615-004-00-3	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 3, H412 EUH032	[1]

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2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	EC: 214-684-5 CAS: 1185-53-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
Trometamol	EC: 201-064-4 CAS: 77-86-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335  <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
- [6] Additional disclosure due to company policy
- [A] Constituent
- [B] Impurity
- [C] Stabilising additive

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

<b>Eye contact</b>	: DMSO (high purity)	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.
	DEPC 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.
	10X AffinityScript 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.
	20X dNTP Mix With Amino Allyl dUTP	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Oligo (dT) Primer (12-18)	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.
	0.1 M 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.
	RNase block	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.
	AffinityScript HC Reverse Transcriptase	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.
	Glycogen	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.
	2X Coupling Buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	DNA-Binding Solution	Immediately flush eyes with plenty of water, occasionally

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		lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
<b>Inhalation</b>	: DMSO (high purity)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	DEPC Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10X AffinityScript 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.
	20X dNTP Mix With Amino Alkyl dUTP	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Oligo (dT) Primer (12-18)	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.
	0.1 M DTT	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	RNase block	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	AffinityScript HC Reverse Transcriptase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Glycogen	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	2X Coupling Buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	DNA-Binding Solution	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.



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<b>Skin contact</b>	: DMSO (high purity)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DEPC Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10X AffinityScript Reaction Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	20X dNTP Mix With Amino Allyl dUTP	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Oligo (dT) Primer (12-18)	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.
	0.1 M DTT	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	RNase block	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	AffinityScript HC Reverse Transcriptase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Glycogen	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	2X Coupling Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	DNA-Binding Solution	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.
<b>Ingestion</b>	: DMSO (high purity)	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.
	DEPC 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.
	10X AffinityScript 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.
	20X dNTP Mix With Amino Allyl dUTP	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.

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Oligo (dT) Primer (12-18)	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.
0.1 M 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.
RNase block	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.
AffinityScript HC Reverse Transcriptase	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.
Glycogen	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.
2X Coupling 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.
DNA-Binding Solution	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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<b>Protection of first-aiders</b>	: DMSO (high purity)	No action shall be taken involving any personal risk or without suitable training.
	DEPC Water	No action shall be taken involving any personal risk or without suitable training.
	10X AffinityScript Reaction Buffer	No action shall be taken involving any personal risk or without suitable training.
	20X dNTP Mix With Amino Alkyl dUTP	No action shall be taken involving any personal risk or without suitable training.
	Oligo (dT) Primer (12-18)	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.
	0.1 M DTT	No action shall be taken involving any personal risk or without suitable training.
	RNase block	No action shall be taken involving any personal risk or without suitable training.
	AffinityScript HC Reverse Transcriptase	No action shall be taken involving any personal risk or without suitable training.
	Glycogen	No action shall be taken involving any personal risk or without suitable training.
	2X Coupling Buffer	No action shall be taken involving any personal risk or without suitable training.
	DNA-Binding Solution	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

#### Potential acute health effects

<b>Eye contact</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript Reaction Buffer	No known significant effects or critical hazards.
	20X dNTP Mix With Amino Alkyl dUTP	No known significant effects or critical hazards.
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC Reverse Transcriptase	No known significant effects or critical hazards.
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.
<b>Inhalation</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript Reaction Buffer	No known significant effects or critical hazards.
	20X dNTP Mix With Amino Alkyl dUTP	No known significant effects or critical hazards.
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC Reverse Transcriptase	No known significant effects or critical hazards.
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.

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	DNA-Binding Solution	Harmful if inhaled.
<b>Skin contact</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
<b>Ingestion</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
DNA-Binding Solution	Harmful if swallowed.	

### Over-exposure signs/symptoms

<b>Eye contact</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
<b>Inhalation</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.

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**SECTION 4: First aid measures**

	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	No specific data.
<b>Skin contact</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	No specific data.
<b>Ingestion</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	No specific data.

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

<b>Notes to physician</b>	: DMSO (high purity)	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	DEPC Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	10X AffinityScript	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.
	Reaction Buffer	
	20X dNTP Mix With	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	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.
	0.1 M DTT	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	RNase block	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	AffinityScript HC	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Reverse Transcriptase	
	Glycogen	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	2X Coupling Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	DNA-Binding Solution	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

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**SECTION 4: First aid measures**

<b>Specific treatments</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment.
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**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
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<b>Unsuitable extinguishing media</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known. None known.
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**5.2 Special hazards arising from the substance or mixture**

<b>Hazards from the substance or mixture</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18)	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst.
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## SECTION 5: Firefighting measures

Random Primers	In a fire or if heated, a pressure increase will occur and the container may burst.
0.1 M DTT	In a fire or if heated, a pressure increase will occur and the container may burst.
RNase block	In a fire or if heated, a pressure increase will occur and the container may burst.
AffinityScript HC	In a fire or if heated, a pressure increase will occur and the container may burst.
Reverse Transcriptase	In a fire or if heated, a pressure increase will occur and the container may burst.
Glycogen	In a fire or if heated, a pressure increase will occur and the container may burst.
2X Coupling Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
DNA-Binding Solution	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
<b>Hazardous combustion products</b> : DMSO (high purity)	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
DEPC Water	No specific data.
10X AffinityScript Reaction Buffer	Decomposition products may include the following materials:  carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
20X dNTP Mix With Amino Allyl dUTP	No specific data.
Oligo (dT) Primer (12-18)	No specific data.
Random Primers	No specific data.
0.1 M DTT	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
RNase block	Decomposition products may include the following materials: carbon dioxide carbon monoxide
AffinityScript HC	Decomposition products may include the following materials:
Reverse Transcriptase	carbon dioxide carbon monoxide
Glycogen	Decomposition products may include the following materials: carbon dioxide carbon monoxide
2X Coupling Buffer	Decomposition products may include the following materials: metal oxide/oxides
DNA-Binding Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides halogenated compounds

### 5.3 Advice for firefighters

## SECTION 5: Firefighting measures

<b>Special precautions for fire-fighters</b>	: DMSO (high purity)	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.	
	DEPC 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.	
	10X AffinityScript 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.	
	20X dNTP Mix With Amino Allyl dUTP	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 (12-18)	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.	
	0.1 M 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.	
	RNase block	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.	
	AffinityScript HC Reverse Transcriptase	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.	
	Glycogen	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.	
	2X Coupling Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.	
	DNA-Binding Solution	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.	
	<b>Special protective equipment for fire-fighters</b>	: DMSO (high purity)	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.
		DEPC 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.
10X AffinityScript 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.	
20X dNTP Mix With Amino Allyl dUTP		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 (12-18)		Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full	



## SECTION 5: Firefighting measures

Random Primers	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. 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.
0.1 M 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.
RNase block	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.
AffinityScript HC Reverse Transcriptase	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.
Glycogen	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.
2X Coupling 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.
DNA-Binding Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

<b>For non-emergency personnel</b>	: DMSO (high purity)	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.
	DEPC 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.
	10X AffinityScript Reaction Buffer	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.
20X dNTP Mix With Amino Alkyl dUTP	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
Oligo (dT) Primer (12-18)	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.
0.1 M 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.
RNase block	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.
AffinityScript HC Reverse Transcriptase	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.
Glycogen	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.
2X Coupling Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
DNA-Binding Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b> : DMSO (high purity)	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".
DEPC 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".
10X AffinityScript 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".

## SECTION 6: Accidental release measures

20X dNTP Mix With Amino Allyl dUTP	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 (12-18)	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".
0.1 M 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".
RNase block	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".
AffinityScript HC Reverse Transcriptase	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".
Glycogen	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".
2X Coupling 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".
DNA-Binding Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: DMSO (high purity)	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).
DEPC 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).
10X AffinityScript 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).
20X dNTP Mix With Amino Allyl dUTP	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 (12-18)	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).

## SECTION 6: Accidental release measures

0.1 M 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).
RNase block	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).
AffinityScript HC Reverse Transcriptase	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).
Glycogen	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).
2X Coupling 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).
DNA-Binding Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

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

<b>Methods for cleaning up</b> : DMSO (high purity)	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.
DEPC 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.
10X AffinityScript 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.
20X dNTP Mix With Amino Alkyl dUTP	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Oligo (dT) Primer (12-18)	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.
0.1 M 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

## SECTION 6: Accidental release measures

RNase block	place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
AffinityScript HC Reverse Transcriptase	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.
Glycogen	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.
2X Coupling Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
DNA-Binding Solution	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**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>	: DMSO (high purity)	Put on appropriate personal protective equipment (see Section 8).
	DEPC Water	Put on appropriate personal protective equipment (see Section 8).
	10X AffinityScript Reaction Buffer	Put on appropriate personal protective equipment (see Section 8).
	20X dNTP Mix With Amino Allyl dUTP	Put on appropriate personal protective equipment (see Section 8).
	Oligo (dT) Primer (12-18)	Put on appropriate personal protective equipment (see Section 8).
	Random Primers	Put on appropriate personal protective equipment (see Section 8).
	0.1 M DTT	Put on appropriate personal protective equipment (see Section 8).
	RNase block	Put on appropriate personal protective equipment (see Section 8).
	AffinityScript HC Reverse Transcriptase	Put on appropriate personal protective equipment (see Section 8).
	Glycogen	Put on appropriate personal protective equipment (see Section 8).
	2X Coupling Buffer	Put on appropriate personal protective equipment (see Section 8).
	DNA-Binding Solution	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep

## SECTION 7: Handling and storage

### Advice on general occupational hygiene

		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.
: DMSO (high purity)		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.
DEPC 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.
10X AffinityScript 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.
20X dNTP Mix With Amino Alkyl dUTP		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 (12-18)		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.
0.1 M 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.
RNase block		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.
AffinityScript HC Reverse Transcriptase		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.
Glycogen		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

## SECTION 7: Handling and storage

2X Coupling Buffer	protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
DNA-Binding Solution	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

<b>Storage</b>	: DMSO (high purity)	Storage temperature: -20°C (-4°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	DEPC 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. See Section 10 for incompatible materials before handling or use.
	10X AffinityScript 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. See Section 10 for incompatible materials before handling or use.
	20X dNTP Mix With Amino Alkyl dUTP	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Oligo (dT) Primer (12-18)	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

## SECTION 7: Handling and storage

	<p>been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Random Primers	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
0.1 M DTT	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
RNase block	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
AffinityScript HC Reverse Transcriptase	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
Glycogen	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p>
2X Coupling Buffer	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use</p>



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DNA-Binding Solution	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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
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### 7.3 Specific end use(s)

<b>Recommendations</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. 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>RNase block</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist
<b>AffinityScript HC Reverse Transcriptase</b> Glycerol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Mist

## SECTION 8: Exposure controls/personal protection

**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.

### 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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

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

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

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

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	:	DMSO (high purity)	Liquid. [Clear.]
		DEPC Water	Liquid.
		10X AffinityScript	Liquid.
		Reaction Buffer	
		20X dNTP Mix With	Liquid.
		Amino Allyl dUTP	
		Oligo (dT) Primer (12-18)	Liquid.
		Random Primers	Liquid.
		0.1 M DTT	Liquid.
		RNase block	Liquid.
		AffinityScript HC	Liquid.
		Reverse Transcriptase	
		Glycogen	Liquid.
		2X Coupling Buffer	Liquid.
		DNA-Binding Solution	Liquid.
<b>Colour</b>	:	DMSO (high purity)	Colourless.
		DEPC Water	Not available.
		10X AffinityScript	Not available.
		Reaction Buffer	
		20X dNTP Mix With	Not available.
		Amino Allyl dUTP	
		Oligo (dT) Primer (12-18)	Not available.
		Random Primers	Not available.
		0.1 M DTT	Not available.
		RNase block	Not available.
		AffinityScript HC	Not available.
		Reverse Transcriptase	
		Glycogen	Not available.
		2X Coupling Buffer	Not available.
		DNA-Binding Solution	Not available.
<b>Odour</b>	:	DMSO (high purity)	Odourless. [Slight]
		DEPC Water	Not available.
		10X AffinityScript	Not available.
		Reaction Buffer	
		20X dNTP Mix With	Not available.
		Amino Allyl dUTP	
		Oligo (dT) Primer (12-18)	Not available.
		Random Primers	Not available.
		0.1 M DTT	Not available.
		RNase block	Not available.
		AffinityScript HC	Not available.
		Reverse Transcriptase	
		Glycogen	Not available.
		2X Coupling Buffer	Not available.
		DNA-Binding Solution	Not available.
<b>Odour threshold</b>	:	DMSO (high purity)	Not available.
		DEPC Water	Not available.
		10X AffinityScript	Not available.
		Reaction Buffer	
		20X dNTP Mix With	Not available.
		Amino Allyl dUTP	
		Oligo (dT) Primer (12-18)	Not available.
		Random Primers	Not available.
		0.1 M DTT	Not available.

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	RNase block	Not available.
	AffinityScript HC	Not available.
	Reverse Transcriptase	
	Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.
<b>pH</b>	: DMSO (high purity)	Not available.
	DEPC Water	7
	10X AffinityScript	8.3
	Reaction Buffer	
	20X dNTP Mix With	7.5
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	7.5
	Random Primers	7.5
	0.1 M DTT	Not available.
	RNase block	7.6
	AffinityScript HC	8
	Reverse Transcriptase	
	Glycogen	Not available.
	2X Coupling Buffer	9.1
	DNA-Binding Solution	6.4
<b>Melting point/freezing point</b>	: DMSO (high purity)	18.5°C
	DEPC Water	0°C
	10X AffinityScript	Not available.
	Reaction Buffer	
	20X dNTP Mix With	0°C
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	0°C
	Random Primers	0°C
	0.1 M DTT	0°C
	RNase block	Not available.
	AffinityScript HC	Not available.
	Reverse Transcriptase	
	Glycogen	0°C
	2X Coupling Buffer	0°C
	DNA-Binding Solution	0°C
<b>Initial boiling point and boiling range</b>	: DMSO (high purity)	189°C
	DEPC Water	100°C
	10X AffinityScript	Not available.
	Reaction Buffer	
	20X dNTP Mix With	100°C
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	100°C
	Random Primers	100°C
	0.1 M DTT	100°C
	RNase block	Not available.
	AffinityScript HC	Not available.
	Reverse Transcriptase	
	Glycogen	100°C
	2X Coupling Buffer	100°C
	DNA-Binding Solution	100°C
<b>Flash point</b>	: DMSO (high purity)	Closed cup: 87°C
	DEPC Water	Not available.
	10X AffinityScript	Not available.
	Reaction Buffer	
	20X dNTP Mix With	Not available.
	Amino Allyl dUTP	
	Oligo (dT) Primer	Not available.

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## SECTION 9: Physical and chemical properties

	(12-18)	
	Random Primers	Not available.
	0.1 M DTT	Not available.
	RNase block	Not available.
	AffinityScript HC	Not available.
	Reverse Transcriptase	
	Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.
<b>Evaporation rate</b>	: DMSO (high purity)	0.026 (butyl acetate = 1)
	DEPC Water	Not available.
	10X AffinityScript	Not available.
	Reaction Buffer	
	20X dNTP Mix With	Not available.
	Amino Allyl dUTP	
	Oligo (dT) Primer	Not available.
	(12-18)	
	Random Primers	Not available.
	0.1 M DTT	Not available.
	RNase block	Not available.
	AffinityScript HC	Not available.
	Reverse Transcriptase	
	Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.
<b>Flammability (solid, gas)</b>	: DMSO (high purity)	Not applicable.
	DEPC Water	Not applicable.
	10X AffinityScript	Not applicable.
	Reaction Buffer	
	20X dNTP Mix With	Not applicable.
	Amino Allyl dUTP	
	Oligo (dT) Primer	Not applicable.
	(12-18)	
	Random Primers	Not applicable.
	0.1 M DTT	Not applicable.
	RNase block	Not applicable.
	AffinityScript HC	Not applicable.
	Reverse Transcriptase	
	Glycogen	Not applicable.
	2X Coupling Buffer	Not applicable.
	DNA-Binding Solution	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: DMSO (high purity)	Lower: 2.6%
		Upper: 42%
	DEPC Water	Not available.
	10X AffinityScript	Not available.
	Reaction Buffer	
	20X dNTP Mix With	Not available.
	Amino Allyl dUTP	
	Oligo (dT) Primer	Not available.
	(12-18)	
	Random Primers	Not available.
	0.1 M DTT	Not available.
	RNase block	Not available.
	AffinityScript HC	Not available.
	Reverse Transcriptase	
	Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.

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## SECTION 9: Physical and chemical properties

<b>Vapour pressure</b>	:	DMSO (high purity)	0.059 kPa [room temperature]
		DEPC Water	Not available.
		10X AffinityScript	Not available.
		Reaction Buffer	
		20X dNTP Mix With	Not available.
		Amino Allys dUTP	
		Oligo (dT) Primer	Not available.
		(12-18)	
		Random Primers	Not available.
		0.1 M DTT	Not available.
		RNase block	Not available.
		AffinityScript HC	Not available.
		Reverse Transcriptase	
		Glycogen	Not available.
		2X Coupling Buffer	Not available.
		DNA-Binding Solution	Not available.
<b>Vapour density</b>	:	DMSO (high purity)	2.7 [Air = 1]
		DEPC Water	Not available.
		10X AffinityScript	Not available.
		Reaction Buffer	
		20X dNTP Mix With	Not available.
		Amino Allys dUTP	
		Oligo (dT) Primer	Not available.
		(12-18)	
		Random Primers	Not available.
		0.1 M DTT	Not available.
		RNase block	Not available.
		AffinityScript HC	Not available.
		Reverse Transcriptase	
		Glycogen	Not available.
		2X Coupling Buffer	Not available.
		DNA-Binding Solution	Not available.
<b>Relative density</b>	:	DMSO (high purity)	1.1
		DEPC Water	1
		10X AffinityScript	Not available.
		Reaction Buffer	
		20X dNTP Mix With	Not available.
		Amino Allys dUTP	
		Oligo (dT) Primer	Not available.
		(12-18)	
		Random Primers	Not available.
		0.1 M DTT	Not available.
		RNase block	Not available.
		AffinityScript HC	Not available.
		Reverse Transcriptase	
		Glycogen	Not available.
		2X Coupling Buffer	Not available.
		DNA-Binding Solution	Not available.
<b>Solubility(ies)</b>	:	DMSO (high purity)	Easily soluble in the following materials: cold water and hot water.
		DEPC Water	Easily soluble in the following materials: cold water and hot water.
		10X AffinityScript	Easily soluble in the following materials: cold water and hot water.
		Reaction Buffer	Easily soluble in the following materials: cold water and hot water.
		20X dNTP Mix With	Easily soluble in the following materials: cold water and hot water.
		Amino Allys dUTP	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.
		(12-18)	
		Random Primers	Easily soluble in the following materials: cold water and hot water.
		0.1 M DTT	Easily soluble in the following materials: cold water and hot water.

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## SECTION 9: Physical and chemical properties

		hot water.
	RNase block	Soluble in the following materials: cold water and hot water.
	AffinityScript HC Reverse Transcriptase Glycogen	Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
	2X Coupling Buffer	Easily soluble in the following materials: cold water and hot water.
	DNA-Binding Solution	Soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: DMSO (high purity)	-1.35
	DEPC Water	Not available.
	10X AffinityScript Reaction Buffer	Not available.
	20X dNTP Mix With Amino Allyl dUTP	Not available.
	Oligo (dT) Primer (12-18)	Not available.
	Random Primers	Not available.
	0.1 M DTT	Not available.
	RNase block	Not available.
	AffinityScript HC Reverse Transcriptase Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.
<b>Auto-ignition temperature</b>	: DMSO (high purity)	300 to 302°C
	DEPC Water	Not available.
	10X AffinityScript Reaction Buffer	Not available.
	20X dNTP Mix With Amino Allyl dUTP	Not available.
	Oligo (dT) Primer (12-18)	Not available.
	Random Primers	Not available.
	0.1 M DTT	Not available.
	RNase block	Not available.
	AffinityScript HC Reverse Transcriptase Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.
<b>Decomposition temperature</b>	: DMSO (high purity)	140 to 189°C
	DEPC Water	Not available.
	10X AffinityScript Reaction Buffer	Not available.
	20X dNTP Mix With Amino Allyl dUTP	Not available.
	Oligo (dT) Primer (12-18)	Not available.
	Random Primers	Not available.
	0.1 M DTT	Not available.
	RNase block	Not available.
	AffinityScript HC Reverse Transcriptase Glycogen	Not available.
	2X Coupling Buffer	Not available.
	DNA-Binding Solution	Not available.

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## SECTION 9: Physical and chemical properties

<b>Viscosity</b>	: DMSO (high purity)	Dynamic (room temperature): 2.14 mPa·s	
	DEPC Water	Not available.	
	10X AffinityScript Reaction Buffer	Not available.	
	20X dNTP Mix With Amino Allyl dUTP	Not available.	
	Oligo (dT) Primer (12-18)	Not available.	
	Random Primers	Not available.	
	0.1 M DTT	Not available.	
	RNase block	Not available.	
	AffinityScript HC	Not available.	
	Reverse Transcriptase		
	Glycogen	Not available.	
	2X Coupling Buffer	Not available.	
	DNA-Binding Solution	Not available.	
	<b>Explosive properties</b>	: DMSO (high purity)	Not available.
		DEPC Water	Not available.
10X AffinityScript Reaction Buffer		Not available.	
20X dNTP Mix With Amino Allyl dUTP		Not available.	
Oligo (dT) Primer (12-18)		Not available.	
Random Primers		Not available.	
0.1 M DTT		Not available.	
RNase block		Not available.	
AffinityScript HC		Not available.	
Reverse Transcriptase			
Glycogen		Not available.	
2X Coupling Buffer		Not available.	
DNA-Binding Solution		Not available.	
<b>Oxidising properties</b>		: DMSO (high purity)	Not available.
		DEPC Water	Not available.
	10X AffinityScript Reaction Buffer	Not available.	
	20X dNTP Mix With Amino Allyl dUTP	Not available.	
	Oligo (dT) Primer (12-18)	Not available.	
	Random Primers	Not available.	
	0.1 M DTT	Not available.	
	RNase block	Not available.	
	AffinityScript HC	Not available.	
	Reverse Transcriptase		
	Glycogen	Not available.	
	2X Coupling Buffer	Not available.	
	DNA-Binding Solution	Not available.	

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: DMSO (high purity)	No specific test data related to reactivity available for this product or its ingredients.
	DEPC Water	No specific test data related to reactivity available for this product or its ingredients.
	10X AffinityScript Reaction Buffer	No specific test data related to reactivity available for this product or its ingredients.
	20X dNTP Mix With	No specific test data related to reactivity available for this



## SECTION 10: Stability and reactivity

Amino Allyl dUTP	product or its ingredients.
Oligo (dT) Primer (12-18)	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.
0.1 M DTT	No specific test data related to reactivity available for this product or its ingredients.
RNase block	No specific test data related to reactivity available for this product or its ingredients.
AffinityScript HC	No specific test data related to reactivity available for this product or its ingredients.
Reverse Transcriptase	No specific test data related to reactivity available for this product or its ingredients.
Glycogen	No specific test data related to reactivity available for this product or its ingredients.
2X Coupling Buffer	No specific test data related to reactivity available for this product or its ingredients.
DNA-Binding Solution	No specific test data related to reactivity available for this product or its ingredients.

### 10.2 Chemical stability

: DMSO (high purity)	The product is stable.
DEPC Water	The product is stable.
10X AffinityScript Reaction Buffer	The product is stable.
20X dNTP Mix With Amino Allyl dUTP	The product is stable.
Oligo (dT) Primer (12-18)	The product is stable.
Random Primers	The product is stable.
0.1 M DTT	The product is stable.
RNase block	The product is stable.
AffinityScript HC	The product is stable.
Reverse Transcriptase	The product is stable.
Glycogen	The product is stable.
2X Coupling Buffer	The product is stable.
DNA-Binding Solution	The product is stable.

### 10.3 Possibility of hazardous reactions

: DMSO (high purity)	Under normal conditions of storage and use, hazardous reactions will not occur.
DEPC Water	Under normal conditions of storage and use, hazardous reactions will not occur.
10X AffinityScript Reaction Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
20X dNTP Mix With Amino Allyl dUTP	Under normal conditions of storage and use, hazardous reactions will not occur.
Oligo (dT) Primer (12-18)	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.
0.1 M DTT	Under normal conditions of storage and use, hazardous reactions will not occur.
RNase block	Under normal conditions of storage and use, hazardous reactions will not occur.
AffinityScript HC	Under normal conditions of storage and use, hazardous reactions will not occur.
Reverse Transcriptase	Under normal conditions of storage and use, hazardous reactions will not occur.
Glycogen	Under normal conditions of storage and use, hazardous reactions will not occur.
2X Coupling Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
DNA-Binding Solution	Under normal conditions of storage and use, hazardous reactions will not occur.

## SECTION 10: Stability and reactivity

<b>10.4 Conditions to avoid</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
<b>10.5 Incompatible materials</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
<b>10.6 Hazardous decomposition products</b>	: DMSO (high purity)  DEPC Water  10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18)  Random Primers  0.1 M DTT  RNase block  AffinityScript HC Reverse Transcriptase Glycogen  2X Coupling Buffer  DNA-Binding Solution	Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.  Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>DMSO (high purity)</b> Dimethyl sulfoxide	LD50 Dermal LD50 Oral	Rat Rat	40000 mg/kg 14500 mg/kg	- -
<b>2X Coupling Buffer</b> Borax (B <sub>4</sub> Na <sub>2</sub> O <sub>7</sub> ·10H <sub>2</sub> O)	LD50 Oral	Rat	2660 mg/kg	-
<b>DNA-Binding Solution</b> Trometamol	LD50 Dermal LD50 Oral	Rat Rat	>5000 mg/kg 5000 mg/kg	- -

#### Acute toxicity estimates

Route	ATE value
<b>0.1 M DTT</b> Oral	32467.5 mg/kg
<b>DNA-Binding Solution</b> Oral Dermal Inhalation (dusts and mists)	1063.8 mg/kg 2340.4 mg/kg 3.191 mg/l

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>DMSO (high purity)</b> Dimethyl sulfoxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 milligrams	-
<b>DNA-Binding Solution</b> 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
<b>10X AffinityScript Reaction Buffer</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
<b>0.1 M DTT</b> (R*,R*)-1,4-Dimercaptobutane-2,3-diol	Category 3	Not applicable.	Respiratory tract irritation
<b>DNA-Binding Solution</b> 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride Trometamol	Category 3	Not applicable.	Respiratory tract irritation
	Category 3	Not applicable.	Respiratory tract

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## SECTION 11: Toxicological information

irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

: DMSO (high purity)	Routes of entry anticipated: Oral, Dermal, Inhalation.
DEPC Water	Not available.
10X AffinityScript	Routes of entry anticipated: Oral, Dermal, Inhalation.
Reaction Buffer	
20X dNTP Mix With	Not available.
Amino Allyl dUTP	
Oligo (dT) Primer (12-18)	Not available.
Random Primers	Not available.
0.1 M DTT	Routes of entry anticipated: Oral, Dermal, Inhalation.
RNase block	Routes of entry anticipated: Oral, Dermal, Inhalation.
AffinityScript HC	Not available.
Reverse Transcriptase	
Glycogen	Not available.
2X Coupling Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
DNA-Binding Solution	Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

#### Inhalation

: DMSO (high purity)	No known significant effects or critical hazards.
DEPC Water	No known significant effects or critical hazards.
10X AffinityScript	No known significant effects or critical hazards.
Reaction Buffer	
20X dNTP Mix With	No known significant effects or critical hazards.
Amino Allyl dUTP	
Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
0.1 M DTT	No known significant effects or critical hazards.
RNase block	No known significant effects or critical hazards.
AffinityScript HC	No known significant effects or critical hazards.
Reverse Transcriptase	
Glycogen	No known significant effects or critical hazards.
2X Coupling Buffer	No known significant effects or critical hazards.
DNA-Binding Solution	Harmful if inhaled.

#### Ingestion

: DMSO (high purity)	No known significant effects or critical hazards.
DEPC Water	No known significant effects or critical hazards.
10X AffinityScript	No known significant effects or critical hazards.
Reaction Buffer	
20X dNTP Mix With	No known significant effects or critical hazards.
Amino Allyl dUTP	
Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
Random Primers	No known significant effects or critical hazards.
0.1 M DTT	No known significant effects or critical hazards.
RNase block	No known significant effects or critical hazards.
AffinityScript HC	No known significant effects or critical hazards.
Reverse Transcriptase	
Glycogen	No known significant effects or critical hazards.
2X Coupling Buffer	No known significant effects or critical hazards.
DNA-Binding Solution	Harmful if swallowed.

#### Skin contact

: DMSO (high purity)	No known significant effects or critical hazards.
DEPC Water	No known significant effects or critical hazards.
10X AffinityScript	No known significant effects or critical hazards.
Reaction Buffer	
20X dNTP Mix With	No known significant effects or critical hazards.
Amino Allyl dUTP	
Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.
<b>Eye contact</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	No specific data.
<b>Ingestion</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	No specific data.

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## SECTION 11: Toxicological information

<b>Skin contact</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	No specific data.
<b>Eye contact</b>	: DMSO (high purity)	No specific data.
	DEPC Water	No specific data.
	10X AffinityScript	No specific data.
	Reaction Buffer	
	20X dNTP Mix With	No specific data.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No specific data.
	Random Primers	No specific data.
	0.1 M DTT	No specific data.
	RNase block	No specific data.
	AffinityScript HC	No specific data.
	Reverse Transcriptase	
	Glycogen	No specific data.
	2X Coupling Buffer	No specific data.
	DNA-Binding Solution	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

<b>General</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.

## SECTION 11: Toxicological information

<b>Carcinogenicity</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.
<b>Mutagenicity</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.
<b>Teratogenicity</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.
<b>Developmental effects</b>	: DMSO (high purity)	No known significant effects or critical hazards.
	DEPC Water	No known significant effects or critical hazards.
	10X AffinityScript	No known significant effects or critical hazards.
	Reaction Buffer	
	20X dNTP Mix With	No known significant effects or critical hazards.
	Amino Allyl dUTP	
	Oligo (dT) Primer (12-18)	No known significant effects or critical hazards.
	Random Primers	No known significant effects or critical hazards.
	0.1 M DTT	No known significant effects or critical hazards.
	RNase block	No known significant effects or critical hazards.
	AffinityScript HC	No known significant effects or critical hazards.
	Reverse Transcriptase	
	Glycogen	No known significant effects or critical hazards.
	2X Coupling Buffer	No known significant effects or critical hazards.
	DNA-Binding Solution	No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Fertility effects</b>	: DMSO (high purity) DEPC Water 10X AffinityScript Reaction Buffer 20X dNTP Mix With Amino Allyl dUTP Oligo (dT) Primer (12-18) Random Primers 0.1 M DTT RNase block AffinityScript HC Reverse Transcriptase Glycogen 2X Coupling Buffer DNA-Binding Solution	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<b>DMSO (high purity)</b> Dimethyl sulfoxide	Acute LC50 25000 ppm Fresh water Acute LC50 34000000 µg/l Fresh water Chronic NOEC 100 µl/L Marine water	Daphnia - Daphnia magna - Neonate Fish - Pimephales promelas Algae - Ulva lactuca	48 hours 96 hours 72 hours
<b>0.1 M DTT</b> (R*,R*)-1, 4-Dimercaptobutane-2,3-diol	Acute LC50 27000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
<b>2X Coupling Buffer</b> Borax (B <sub>4</sub> Na <sub>2</sub> O <sub>7</sub> .10H <sub>2</sub> O)	Acute EC50 1645 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
<b>DNA-Binding Solution</b> Trometamol	Acute EC50 >980 mg/l Fresh water Acute NOEC 520 mg/l Fresh water	Daphnia Daphnia	48 hours 48 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>DEPC Water</b> Water	-	100 % - 28 days	-	-

  

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>DEPC Water</b> Water	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>DMSO (high purity)</b> Dimethyl sulfoxide	-1.35	3.16	low
<b>DEPC Water</b> Water	-1.38	-	low
<b>DNA-Binding Solution</b> Trometamol	-1.56	-	low

Date of issue/Date of revision : 21/06/2017

40/44



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## SECTION 12: Ecological information

### 12.4 Mobility in soil

Soil/water partition coefficient ( $K_{oc}$ ) : 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** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

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

**Special precautions** : 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 spill material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport 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

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## SECTION 15: Regulatory information

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<b>2X Coupling Buffer</b> Borax (B <sub>4</sub> Na <sub>2</sub> O <sub>7</sub> ·10H <sub>2</sub> O)	Toxic to reproduction	Recommended	ED/30/2010	7/1/2015

<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: DMSO (high purity)	Not applicable.
	: DEPC Water	Not applicable.
	: 10X AffinityScript Reaction Buffer	Not applicable.
	: 20X dNTP Mix With Amino Allyl dUTP	Not applicable.
	: Oligo (dT) Primer (12-18)	Not applicable.
	: Random Primers	Not applicable.
	: 0.1 M DTT	Not applicable.
	: RNase block	Not applicable.
	: AffinityScript HC Reverse Transcriptase	Not applicable.
	: Glycogen	Not applicable.
	: 2X Coupling Buffer	Not applicable.
	: DNA-Binding Solution	Not applicable.

### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Listed

### 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.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Europe</b>	: Not determined.
<b>Japan</b>	: <b>Japan inventory (ENCS):</b> Not determined. <b>Japan inventory (ISHL):</b> Not determined.
<b>Malaysia</b>	: Not determined.

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## SECTION 15: Regulatory information

<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</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.

<b>Abbreviations and acronyms</b>	: 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
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### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
<b>DNA-Binding Solution</b> Acute Tox. 4, H302 Acute Tox. 4, H332 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method

### Full text of abbreviated H statements

<b>10X AffinityScript Reaction Buffer</b> H315 H319 H335	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.
<b>0.1 M DTT</b> H302 H315 H319 H335 H412	Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.
<b>2X Coupling Buffer</b> H360FD	May damage fertility. May damage the unborn child.
<b>DNA-Binding Solution</b> H302 H312 H315 H319 H332 H335 H412	Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. Harmful to aquatic life with long lasting effects.

### Full text of classifications [CLP/GHS]

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## SECTION 16: Other information

### 10X AffinityScript Reaction Buffer

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

### 0.1 M DTT

Acute Tox. 4, H302  
Aquatic Chronic 3, H412  
Eye Irrit. 2, H319  
Skin Irrit. 2, H315  
STOT SE 3, H335

ACUTE TOXICITY (oral) - Category 4  
LONG-TERM (CHRONIC) 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

### 2X Coupling Buffer

Repr. 1B, H360FD

REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 1B

### DNA-Binding Solution

Acute Tox. 4, H302  
Acute Tox. 4, H312  
Acute Tox. 4, H332  
Aquatic Chronic 3, H412  
EUH032  
Eye Irrit. 2, H319  
Skin Irrit. 2, H315  
STOT SE 3, H335

ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (dermal) - Category 4  
ACUTE TOXICITY (inhalation) - Category 4  
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3  
Contact with acids liberates very toxic gas.  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2  
SKIN CORROSION/IRRITATION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE  
(Respiratory tract irritation) - Category 3

**Date of issue/ Date of revision** : 21/06/2017

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

**Version** : 1

#### Notice to reader

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