

SAFETY DATA SHEET



AffinityScript Multiple Temperature cDNA Synthesis Kit, Part Number 200436

Section 1. Identification

1.1 Product identifier

Product name : AffinityScript Multiple Temperature cDNA Synthesis Kit, Part Number 200436
Part No. (Chemical Kit) : 200436
Part No. : RNase-free Water 600164-58
 AffinityScript Multiple Temperature Reverse Transcriptase 200436-60
 10X AffinityScript RT buffer 200420-54
 RNase Block 200820-56
 Oligo(dT) primer 200820-52
 Random primers 200420-53
 100 mM dNTP Mix (25 mM each dNTP) 200820-55

Validation date : 10/27/2016

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

Material uses : Analytical reagent.
 RNase-free Water 1.2 ml
 AffinityScript Multiple Temperature Reverse Transcriptase 0.05 ml (50 Reactions)
 10X AffinityScript RT buffer 0.1 ml
 RNase Block 0.025 ml (1000 U 40 U/μl)
 Oligo(dT) primer 0.05 ml (25 μg 0.5 μg/μl)
 Random primers 0.15 ml (15 μg 0.1 μg/μl)
 100 mM dNTP Mix (25 mM each dNTP) 0.04 ml

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : RNase-free Water While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 AffinityScript Multiple Temperature Reverse Transcriptase This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 10X AffinityScript RT buffer This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 RNase Block This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 Oligo(dT) primer While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 2. Hazards identification

Random primers	1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product. While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
100 mM dNTP Mix (25 mM each dNTP)	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture

AffinityScript Multiple Temperature Reverse Transcriptase

H320 EYE IRRITATION - Category 2B

10X AffinityScript RT buffer

H319 EYE IRRITATION - Category 2A

RNase Block

H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity : 100 mM dNTP Mix (25 mM each dNTP) Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 5.7%

2.2 GHS label elements

Hazard pictograms



Signal word

RNase-free Water	No signal word.
AffinityScript Multiple Temperature Reverse Transcriptase	Warning
10X AffinityScript RT buffer	Warning
RNase Block	Warning
Oligo(dT) primer	No signal word.
Random primers	No signal word.
100 mM dNTP Mix (25 mM each dNTP)	No signal word.

Hazard statements

RNase-free Water	No known significant effects or critical hazards.
AffinityScript Multiple Temperature Reverse Transcriptase	H320 - Causes eye irritation.
10X AffinityScript RT buffer	GHS SYMBOL - Exclamation mark - H319 - Causes serious eye irritation. H320 - Causes eye irritation.
RNase Block	No known significant effects or critical hazards.
Oligo(dT) primer	No known significant effects or critical hazards.
Random primers	No known significant effects or critical hazards.
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Precautionary statements

Section 2. Hazards identification

Prevention	: <input checked="" type="checkbox"/>	RNase-free Water	Not applicable.
		AffinityScript Multiple Temperature Reverse Transcriptase	P264 - Wash hands thoroughly after handling.
		10X AffinityScript RT buffer	P280 - Wear eye or face protection. P264 - Wash hands thoroughly after handling.
		RNase Block	P264 - Wash hands thoroughly after handling.
		Oligo(dT) primer	Not applicable.
		Random primers	Not applicable.
Response	: <input checked="" type="checkbox"/>	100 mM dNTP Mix (25 mM each dNTP)	Not applicable.
		RNase-free Water	Not applicable.
		AffinityScript Multiple Temperature Reverse Transcriptase	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
		10X AffinityScript RT buffer	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
		RNase Block	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
		Oligo(dT) primer	Not applicable.
Storage	: <input checked="" type="checkbox"/>	Random primers	Not applicable.
		100 mM dNTP Mix (25 mM each dNTP)	Not applicable.
		RNase-free Water	Not applicable.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not applicable.
		10X AffinityScript RT buffer	Not applicable.
		RNase Block	Not applicable.
Disposal	: <input checked="" type="checkbox"/>	Oligo(dT) primer	Not applicable.
		Random primers	Not applicable.
		100 mM dNTP Mix (25 mM each dNTP)	Not applicable.
		RNase-free Water	Not applicable.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not applicable.
		10X AffinityScript RT buffer	Not applicable.
Supplemental label elements	: <input checked="" type="checkbox"/>	RNase Block	None known.
		Oligo(dT) primer	None known.
		Random primers	None known.
		10X AffinityScript RT buffer	None known.
		AffinityScript Multiple Temperature Reverse Transcriptase	None known.
		RNase-free Water	None known.

Section 2. Hazards identification

100 mM dNTP Mix (25 mM each dNTP) None known.

2.3 Other hazards

Hazards not otherwise classified

: RNase-free Water None known.
 AffinityScript Multiple Temperature Reverse Transcriptase None known.
 10X AffinityScript RT buffer None known.
 RNase Block None known.
 Oligo(dT) primer None known.
 Random primers None known.
 100 mM dNTP Mix (25 mM each dNTP) None known.

Section 3. Composition/information on ingredients

Substance/mixture : RNase-free Water Substance
 AffinityScript Multiple Temperature Mixture
 Reverse Transcriptase
 10X AffinityScript RT buffer Mixture
 RNase Block Mixture
 Oligo(dT) primer Mixture
 Random primers Mixture
 100 mM dNTP Mix (25 mM each dNTP) Mixture

Ingredient name	%	CAS number
RNase-free Water Water	100	7732-18-5
AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	≥50 - ≤75	56-81-5
10X AffinityScript RT buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride Potassium chloride	<10 ≤10	1185-53-1 7447-40-7
RNase Block Glycerol	≥50 - ≤75	56-81-5
100 mM dNTP Mix (25 mM each dNTP) 2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate) 2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	≤3 ≤3	2564-35-4 1927-31-7

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

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

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: RNase-free Water	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	AffinityScript Multiple Temperature Reverse Transcriptase	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	10X AffinityScript RT buffer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	RNase Block	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
	Oligo(dT) primer	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	Random primers	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	100 mM dNTP Mix (25 mM each dNTP)	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: RNase-free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	AffinityScript Multiple Temperature Reverse Transcriptase	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	10X AffinityScript RT buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a

Section 4. First aid measures

collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

RNase Block	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Oligo(dT) primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Random primers	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
100 mM dNTP Mix (25 mM each dNTP)	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: RNase-free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
AffinityScript Multiple Temperature Reverse Transcriptase	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
10X AffinityScript RT buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
RNase Block	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.
Oligo(dT) primer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Random primers	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
100 mM dNTP Mix (25 mM each dNTP)	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Section 4. First aid measures

Ingestion

: RNase-free Water

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

AffinityScript Multiple Temperature
Reverse Transcriptase

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

10X AffinityScript RT buffer

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

RNase Block

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

Oligo(dT) primer

Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small

Section 4. First aid measures

Random primers	quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
100 mM dNTP Mix (25 mM each dNTP)	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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> Nose-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards. Causes eye irritation. Causes serious eye irritation. Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: <input checked="" type="checkbox"/> Nose-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: <input checked="" type="checkbox"/> Nose-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	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.
Ingestion	: <input checked="" type="checkbox"/> Nose-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	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.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	:	<input checked="" type="checkbox"/> RNase-free Water	No specific data.		
		AffinityScript Multiple Temperature Reverse Transcriptase	Adverse symptoms may include the following: irritation watering redness		
		10X AffinityScript RT buffer	Adverse symptoms may include the following: pain or irritation watering redness		
		RNase Block	Adverse symptoms may include the following: irritation watering redness		
		Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No specific data. No specific data. No specific data.		
Inhalation	:	<input checked="" type="checkbox"/> RNase-free Water	No specific data.		
		AffinityScript Multiple Temperature Reverse Transcriptase	No specific data.		
		10X AffinityScript RT buffer	No specific data.		
		RNase Block	No specific data.		
		Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No specific data. No specific data. No specific data.		
		Skin contact	:	<input checked="" type="checkbox"/> RNase-free Water	No specific data.
				AffinityScript Multiple Temperature Reverse Transcriptase	No specific data.
10X AffinityScript RT buffer	No specific data.				
RNase Block	No specific data.				
Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No specific data. No specific data. No specific data.				
Ingestion	:			<input checked="" type="checkbox"/> RNase-free Water	No specific data.
				AffinityScript Multiple Temperature Reverse Transcriptase	No specific data.
		10X AffinityScript RT buffer	No specific data.		
		RNase Block	No specific data.		
		Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No specific data. No specific data. No specific data.		

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

Notes to physician	:	<input checked="" type="checkbox"/> RNase-free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		AffinityScript Multiple Temperature Reverse Transcriptase	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		10X AffinityScript RT buffer	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical

Section 4. First aid measures

	RNase Block	surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Oligo(dT) primer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Random primers	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	100 mM dNTP Mix (25 mM each dNTP)	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: RNase-free Water	No specific treatment.
	AffinityScript Multiple Temperature Reverse Transcriptase	No specific treatment.
	10X AffinityScript RT buffer	No specific treatment.
	RNase Block	No specific treatment.
	Oligo(dT) primer	No specific treatment.
	Random primers	No specific treatment.
	100 mM dNTP Mix (25 mM each dNTP)	No specific treatment.
Protection of first-aiders	: RNase-free Water	No action shall be taken involving any personal risk or without suitable training.
	AffinityScript Multiple Temperature Reverse Transcriptase	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	10X AffinityScript RT buffer	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	RNase Block	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
	Oligo(dT) primer	No action shall be taken involving any personal risk or without suitable training.
	Random primers	No action shall be taken involving any personal risk or without suitable training.
	100 mM dNTP Mix (25 mM each dNTP)	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: RNase-free Water	Use an extinguishing agent suitable for the surrounding fire.
	AffinityScript Multiple Temperature Reverse Transcriptase	Use an extinguishing agent suitable for the surrounding fire.
	10X AffinityScript RT buffer	Use an extinguishing agent suitable for the surrounding fire.
	RNase Block	Use an extinguishing agent suitable for the surrounding fire.
	Oligo(dT) primer	Use an extinguishing agent suitable for the surrounding fire.

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Unsuitable extinguishing media	Random primers	surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
	100 mM dNTP Mix (25 mM each dNTP)	Use an extinguishing agent suitable for the surrounding fire.
	<input checked="" type="checkbox"/> RNase-free Water	None known.
	AffinityScript Multiple Temperature Reverse Transcriptase	None known.
	10X AffinityScript RT buffer	None known.
	RNase Block	None known.
	Oligo(dT) primer	None known.
	Random primers	None known.
	100 mM dNTP Mix (25 mM each dNTP)	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	<input checked="" type="checkbox"/> RNase-free Water	In a fire or if heated, a pressure increase will occur and the container may burst.	
	AffinityScript Multiple Temperature Reverse Transcriptase	In a fire or if heated, a pressure increase will occur and the container may burst.	
	10X AffinityScript RT buffer	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.	
	Oligo(dT) primer	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Random primers	In a fire or if heated, a pressure increase will occur and the container may burst.	
	100 mM dNTP Mix (25 mM each dNTP)	In a fire or if heated, a pressure increase will occur and the container may burst.	
	Hazardous thermal decomposition products	<input checked="" type="checkbox"/> RNase-free Water	No specific data.
		AffinityScript Multiple Temperature Reverse Transcriptase	Decomposition products may include the following materials: carbon dioxide carbon monoxide
		10X AffinityScript RT buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
RNase Block		Decomposition products may include the following materials: carbon dioxide carbon monoxide	
Oligo(dT) primer		No specific data.	
Random primers		No specific data.	
100 mM dNTP Mix (25 mM each dNTP)		Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides	

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters

: RNase-free Water

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

AffinityScript Multiple Temperature 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.

10X AffinityScript RT 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.

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.

Oligo(dT) primer

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Random primers

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

100 mM dNTP Mix (25 mM each dNTP)

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

: RNase-free Water

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

AffinityScript Multiple Temperature 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.

10X AffinityScript RT buffer

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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.

Oligo(dT) primer

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Random primers

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

100 mM dNTP Mix (25 mM each dNTP)

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: RNase-free Water

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

AffinityScript Multiple Temperature 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

10X AffinityScript RT buffer

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

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

Oligo(dT) primer

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

Random primers

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

100 mM dNTP Mix (25 mM each dNTP)

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

Section 6. Accidental release measures

<p>For emergency responders : RNase-free Water</p>	<p>AffinityScript Multiple Temperature Reverse Transcriptase</p> <p>10X AffinityScript RT buffer</p> <p>RNase Block</p> <p>Oligo(dT) primer</p> <p>Random primers</p> <p>100 mM dNTP Mix (25 mM each dNTP)</p>	<p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p>6.2 Environmental precautions : RNase-free Water</p>	<p>AffinityScript Multiple Temperature Reverse Transcriptase</p> <p>10X AffinityScript RT buffer</p> <p>RNase Block</p> <p>Oligo(dT) primer</p> <p>Random primers</p>	<p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p> <p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p> <p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p> <p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p> <p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p> <p>Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p>

Section 6. Accidental release measures

100 mM dNTP Mix (25 mM each dNTP)

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

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : RNase-free Water

AffinityScript Multiple Temperature 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.

10X AffinityScript RT 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.

RNase Block

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

Oligo(dT) primer

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

Random primers

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

100 mM dNTP Mix (25 mM each dNTP)

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

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

Section 7. Handling and storage


7.1 Precautions for safe handling

Protective measures	:	RNase-free Water	Put on appropriate personal protective equipment (see Section 8).		
		AffinityScript Multiple Temperature Reverse Transcriptase	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.		
		10X AffinityScript RT buffer	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.		
		RNase Block	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.		
		Oligo(dT) primer	Put on appropriate personal protective equipment (see Section 8).		
		Random primers	Put on appropriate personal protective equipment (see Section 8).		
		100 mM dNTP Mix (25 mM each dNTP)	Put on appropriate personal protective equipment (see Section 8).		
		Advice on general occupational hygiene	:	RNase-free Water	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
		AffinityScript Multiple Temperature 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.		
		10X AffinityScript RT 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.		
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				

Section 7. Handling and storage

Oligo(dT) primer	contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Random primers	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
100 mM dNTP Mix (25 mM each dNTP)	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

:  RNase-free Water

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

AffinityScript Multiple Temperature Reverse Transcriptase

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

10X AffinityScript RT buffer

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

RNase Block

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

Section 7. Handling and storage

Oligo(dT) primer	and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
Random primers	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.
100 mM dNTP Mix (25 mM each dNTP)	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations

: RNase-free Water	Industrial applications, Professional applications.
AffinityScript Multiple Temperature Reverse Transcriptase	Industrial applications, Professional applications.
10X AffinityScript RT buffer	Industrial applications, Professional applications.
RNase Block	Industrial applications, Professional applications.
Oligo(dT) primer	Industrial applications, Professional applications.
Random primers	Industrial applications, Professional applications.
100 mM dNTP Mix (25 mM each dNTP)	Industrial applications, Professional applications.

Industrial sector specific solutions

: RNase-free Water	Not applicable.
AffinityScript Multiple Temperature Reverse Transcriptase	Not applicable.
10X AffinityScript RT buffer	Not applicable.
RNase Block	Not applicable.
Oligo(dT) primer	Not applicable.
Random primers	Not applicable.
100 mM dNTP Mix (25 mM each dNTP)	Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
RNase-free Water Water	None.
AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
10X AffinityScript RT buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride Potassium chloride	None. None.
RNase Block Glycerol	OSHA PEL 1989 (United States, 3/1989). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 10 mg/m ³ 8 hours. Form: Total dust OSHA PEL (United States, 2/2013). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
100 mM dNTP Mix (25 mM each dNTP) 2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate) 2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	None. None.

8.2 Exposure controls

Appropriate engineering controls

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

Environmental exposure controls

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

Individual protection measures

Hygiene measures

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

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	<input checked="" type="checkbox"/> RNase-free Water	Liquid.
		AffinityScript Multiple Temperature Reverse Transcriptase	Liquid.
		10X AffinityScript RT buffer	Liquid.
		RNase Block	Liquid.
		Oligo(dT) primer	Liquid.
		Random primers	Liquid.
		100 mM dNTP Mix (25 mM each dNTP)	Liquid.
Color	:	<input checked="" type="checkbox"/> RNase-free Water	Colorless.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
Odor	:	<input checked="" type="checkbox"/> RNase-free Water	Odorless.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
Odor threshold	:	<input checked="" type="checkbox"/> RNase-free Water	Not available.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each	Not available.

Section 9. Physical and chemical properties

	dNTP)	
pH	: <input checked="" type="checkbox"/> RNase-free Water	7
	AffinityScript Multiple Temperature	8
	Reverse Transcriptase	
	10X AffinityScript RT buffer	8.3
	RNase Block	7.6
	Oligo(dT) primer	7.5
	Random primers	7.5
	100 mM dNTP Mix (25 mM each	7.5
	dNTP)	
Melting point	: <input checked="" type="checkbox"/> RNase-free Water	0°C (32°F)
	AffinityScript Multiple Temperature	Not available.
	Reverse Transcriptase	
	10X AffinityScript RT buffer	Not available.
	RNase Block	Not available.
	Oligo(dT) primer	0°C (32°F)
	Random primers	0°C (32°F)
	100 mM dNTP Mix (25 mM each	Not available.
	dNTP)	
Boiling point	: <input checked="" type="checkbox"/> RNase-free Water	100°C (212°F)
	AffinityScript Multiple Temperature	Not available.
	Reverse Transcriptase	
	10X AffinityScript RT buffer	Not available.
	RNase Block	Not available.
	Oligo(dT) primer	100°C (212°F)
	Random primers	100°C (212°F)
	100 mM dNTP Mix (25 mM each	Not available.
	dNTP)	
Flash point	: <input checked="" type="checkbox"/> RNase-free Water	Not available.
	AffinityScript Multiple Temperature	Not available.
	Reverse Transcriptase	
	10X AffinityScript RT buffer	Not available.
	RNase Block	Not available.
	Oligo(dT) primer	Not available.
	Random primers	Not available.
	100 mM dNTP Mix (25 mM each	Not available.
	dNTP)	
Evaporation rate	: <input checked="" type="checkbox"/> RNase-free Water	Not available.
	AffinityScript Multiple Temperature	Not available.
	Reverse Transcriptase	
	10X AffinityScript RT buffer	Not available.
	RNase Block	Not available.
	Oligo(dT) primer	Not available.
	Random primers	Not available.
	100 mM dNTP Mix (25 mM each	Not available.
	dNTP)	
Flammability (solid, gas)	: <input checked="" type="checkbox"/> RNase-free Water	Not applicable.
	AffinityScript Multiple Temperature	Not applicable.
	Reverse Transcriptase	
	10X AffinityScript RT buffer	Not applicable.
	RNase Block	Not applicable.
	Oligo(dT) primer	Not applicable.
	Random primers	Not applicable.
	100 mM dNTP Mix (25 mM each	Not applicable.
	dNTP)	

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	:	<input checked="" type="checkbox"/> RNase-free Water	Not available.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
Vapor pressure	:	<input checked="" type="checkbox"/> RNase-free Water	Not available.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
Vapor density	:	<input checked="" type="checkbox"/> RNase-free Water	Not available.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
Relative density	:	<input checked="" type="checkbox"/> RNase-free Water	Not available.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each dNTP)	Not available.
Solubility	:	<input checked="" type="checkbox"/> RNase-free Water	Easily soluble in the following materials: cold water and hot water.
		AffinityScript Multiple Temperature Reverse Transcriptase	Soluble in the following materials: cold water and hot water.
		10X AffinityScript RT buffer	Easily soluble in the following materials: cold water and hot water.
		RNase Block	Soluble in the following materials: cold water and hot water.
		Oligo(dT) primer	Easily soluble in the following materials: cold water and hot water.
		Random primers	Easily soluble in the following materials: cold water and hot water.
		100 mM dNTP Mix (25 mM each dNTP)	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	<input checked="" type="checkbox"/> RNase-free Water	Not available.
		AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
		10X AffinityScript RT buffer	Not available.
		RNase Block	Not available.
		Oligo(dT) primer	Not available.
		Random primers	Not available.
		100 mM dNTP Mix (25 mM each	Not available.

Section 9. Physical and chemical properties

Auto-ignition temperature	dNTP)	
	: RNase-free Water	Not available.
	AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
	10X AffinityScript RT buffer	Not available.
	RNase Block	Not available.
	Oligo(dT) primer	Not available.
	Random primers	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
Decomposition temperature	: RNase-free Water	Not available.
	AffinityScript Multiple Temperature Reverse Transcriptase	Not available.
	10X AffinityScript RT buffer	Not available.
	RNase Block	Not available.
	Oligo(dT) primer	Not available.
	Random primers	Not available.
	100 mM dNTP Mix (25 mM each dNTP)	Not available.
	Viscosity	: RNase-free Water
AffinityScript Multiple Temperature Reverse Transcriptase		Not available.
10X AffinityScript RT buffer		Not available.
RNase Block		Not available.
Oligo(dT) primer		Not available.
Random primers		Not available.
100 mM dNTP Mix (25 mM each dNTP)		Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: RNase-free Water	No specific test data related to reactivity available for this product or its ingredients.
	AffinityScript Multiple Temperature Reverse Transcriptase	No specific test data related to reactivity available for this product or its ingredients.
	10X AffinityScript RT buffer	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.
	Oligo(dT) primer	No specific test data related to reactivity available for this product or its ingredients.
	Random primers	No specific test data related to reactivity available for this product or its ingredients.
	100 mM dNTP Mix (25 mM each dNTP)	No specific test data related to reactivity available for this product or its ingredients.
	10.2 Chemical stability	: RNase-free Water
AffinityScript Multiple Temperature Reverse Transcriptase		The product is stable.
10X AffinityScript RT buffer		The product is stable.
RNase Block		The product is stable.
Oligo(dT) primer		The product is stable.
Random primers		The product is stable.
100 mM dNTP Mix (25 mM each dNTP)		The product is stable.

Section 10. Stability and reactivity

10.3 Possibility of hazardous reactions

<input checked="" type="checkbox"/> RNase-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
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10.4 Conditions to avoid

<input checked="" type="checkbox"/> RNase-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
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10.5 Incompatible materials

<input checked="" type="checkbox"/> RNase-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers 100 mM dNTP Mix (25 mM each dNTP)	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
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10.6 Hazardous decomposition products

<input checked="" type="checkbox"/> RNase-free Water AffinityScript Multiple Temperature Reverse Transcriptase 10X AffinityScript RT buffer RNase Block Oligo(dT) primer Random primers	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 10. Stability and reactivity

100 mM dNTP Mix (25 mM each dNTP)

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	LD50 Oral	Rat	12600 mg/kg	-
10X AffinityScript RT buffer Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
RNase Block Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		24 hours 500 milligrams
10X AffinityScript RT buffer Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
RNase Block Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-		24 hours 500 milligrams

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
10X AffinityScript RT buffer 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

<input checked="" type="checkbox"/> RNase-free Water	Not available.
AffinityScript Multiple Temperature Reverse Transcriptase	Routes of entry anticipated: Oral, Dermal, Inhalation.
10X AffinityScript RT buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
RNase Block	Routes of entry anticipated: Dermal.
Oligo(dT) primer	Not available.
Random primers	Not available.
100 mM dNTP Mix (25 mM each dNTP)	Not available.

Potential acute health effects

Eye contact

<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
AffinityScript Multiple Temperature Reverse Transcriptase	Causes eye irritation.
10X AffinityScript RT buffer	Causes serious eye irritation.
RNase Block	Causes eye irritation.
Oligo(dT) primer	No known significant effects or critical hazards.
Random primers	No known significant effects or critical hazards.
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Inhalation

<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
10X AffinityScript RT buffer	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
Oligo(dT) primer	No known significant effects or critical hazards.
Random primers	No known significant effects or critical hazards.
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Skin contact

<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
10X AffinityScript RT buffer	No known significant effects or critical hazards.
RNase Block	No known significant effects or critical hazards.
Oligo(dT) primer	No known significant effects or critical hazards.
Random primers	No known significant effects or critical hazards.
100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion	: <input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
	AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
	10X AffinityScript RT buffer	No known significant effects or critical hazards.
	RNase Block	No known significant effects or critical hazards.
	Oligo(dT) primer	No known significant effects or critical hazards.
	Random primers	No known significant effects or critical hazards.
	100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: <input checked="" type="checkbox"/> RNase-free Water	No specific data.
	AffinityScript Multiple Temperature Reverse Transcriptase	Adverse symptoms may include the following: irritation watering redness
	10X AffinityScript RT buffer	Adverse symptoms may include the following: pain or irritation watering redness
	RNase Block	Adverse symptoms may include the following: irritation watering redness
	Oligo(dT) primer	No specific data.
	Random primers	No specific data.
	100 mM dNTP Mix (25 mM each dNTP)	No specific data.
Inhalation	: <input checked="" type="checkbox"/> RNase-free Water	No specific data.
	AffinityScript Multiple Temperature Reverse Transcriptase	No specific data.
	10X AffinityScript RT buffer	No specific data.
	RNase Block	No specific data.
	Oligo(dT) primer	No specific data.
	Random primers	No specific data.
	100 mM dNTP Mix (25 mM each dNTP)	No specific data.
Skin contact	: <input checked="" type="checkbox"/> RNase-free Water	No specific data.
	AffinityScript Multiple Temperature Reverse Transcriptase	No specific data.
	10X AffinityScript RT buffer	No specific data.
	RNase Block	No specific data.
	Oligo(dT) primer	No specific data.
	Random primers	No specific data.
	100 mM dNTP Mix (25 mM each dNTP)	No specific data.
Ingestion	: <input checked="" type="checkbox"/> RNase-free Water	No specific data.
	AffinityScript Multiple Temperature Reverse Transcriptase	No specific data.
	10X AffinityScript RT buffer	No specific data.
	RNase Block	No specific data.
	Oligo(dT) primer	No specific data.
	Random primers	No specific data.
	100 mM dNTP Mix (25 mM each dNTP)	No specific data.

Section 11. Toxicological information

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
		AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RNase Block	No known significant effects or critical hazards.
		Oligo(dT) primer	No known significant effects or critical hazards.
		Random primers	No known significant effects or critical hazards.
Carcinogenicity	:	<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
		AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RNase Block	No known significant effects or critical hazards.
		Oligo(dT) primer	No known significant effects or critical hazards.
		Random primers	No known significant effects or critical hazards.
Mutagenicity	:	<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
		AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RNase Block	No known significant effects or critical hazards.
		Oligo(dT) primer	No known significant effects or critical hazards.
		Random primers	No known significant effects or critical hazards.
Teratogenicity	:	<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
		AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RNase Block	No known significant effects or critical hazards.
		Oligo(dT) primer	No known significant effects or critical hazards.
		Random primers	No known significant effects or critical hazards.
Developmental effects	:	<input checked="" type="checkbox"/> RNase-free Water	No known significant effects or critical hazards.
		AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
		10X AffinityScript RT buffer	No known significant effects or critical hazards.
		RNase Block	No known significant effects or critical hazards.
		Oligo(dT) primer	No known significant effects or critical hazards.
		Random primers	No known significant effects or critical hazards.
		100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects	RNase-free Water	No known significant effects or critical hazards.
	AffinityScript Multiple Temperature Reverse Transcriptase	No known significant effects or critical hazards.
	10X AffinityScript RT buffer	No known significant effects or critical hazards.
	RNase Block	No known significant effects or critical hazards.
	Oligo(dT) primer	No known significant effects or critical hazards.
	Random primers	No known significant effects or critical hazards.
	100 mM dNTP Mix (25 mM each dNTP)	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
10X AffinityScript RT buffer Oral	46428.6 mg/kg

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
10X AffinityScript RT buffer Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 141460 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 12.77 mg/l Fresh water	Crustaceans - Pseudosida ramosa - Neonate	48 hours
	Acute LC50 880000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
RNase Block Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
RNase-free Water Water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RNase-free Water Water	-	-	Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
RNase-free Water Water	-1.38	-	low
AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	-1.76	-	low
10X AffinityScript RT buffer Potassium chloride	-0.46	-	low
RNase Block Glycerol	-1.76	-	low

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

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

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

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

Section 14. Transport information

Regulatory information

DOT / IMDG / IATA : Not regulated.

Section 15. Regulatory information

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

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.
Clean Water Act (CWA) 311: Edetic acid

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

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<input checked="" type="checkbox"/> AffinityScript Multiple Temperature Reverse Transcriptase Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
10X AffinityScript RT buffer 2-Amino-2-(hydroxymethyl)propane-1, 3-diol hydrochloride	<10	No.	No.	No.	Yes.	No.
Potassium chloride	≤10	No.	No.	No.	Yes.	No.
RNase Block Glycerol	≥50 - ≤75	No.	No.	No.	Yes.	No.
100 mM dNTP Mix (25 mM each dNTP) 2'-Deoxyguanosine 5'-(tetrahydrogen triphosphate)	≤3	No.	No.	No.	Yes.	No.
2'-Deoxyadenosine 5'-(tetrahydrogen triphosphate)	≤3	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: GLYCERINE MIST

New York : None of the components are listed.

New Jersey : The following components are listed: GLYCERIN; 1,2,3-PROPANETRIOL

Section 15. Regulatory information

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

California Prop. 65

No products were found.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : Not determined.
- Canada inventory** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS):** Not determined.
 Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : Not determined.
- Taiwan** : All components are listed or exempted.
- Turkey** : Not determined.

Section 16. Other information

History

Date of issue : 10/27/2016

Date of previous issue : 10/30/2013.

Version : 4

Indicates information that has changed from previously issued version.

Notice to reader

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