

# SAFETY DATA SHEET

Brilliant II QRT-PCR - AffinityScript Two-Step Master Mix, Part Number 600827

## Section 1. Identification

**Product identifier** : Brilliant II QRT-PCR - AffinityScript Two-Step Master Mix, Part Number 600827

**Part no. (chemical kit)** : 600827

**Part no.** : 600559 AffinityScript QPCR cDNA Synthesis Kit

RNase-Free Water	600164-58
Oligo (dT) Primer	600554-53
Random Primers	600554-54
2X cDNA Synthesis Master Mix	600559-51
AffinityScript RT/RNase Block Enzyme Mixture	600559-52
<u>600804 Brilliant II QPCR Master Mix</u>	
2X Brilliant II QPCR Master Mix	600804-51
Reference Dye	600530-53

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

**Identified uses** :

<input checked="" type="checkbox"/> Analytical reagent.	
<input checked="" type="checkbox"/> RNase-Free Water	1.2 ml
<input checked="" type="checkbox"/> Oligo (dT) Primer	0.2 ml (15 µg 100 ng/µl)
<input checked="" type="checkbox"/> Random Primers	0.2 ml (15 µg 100 ng/µl)
<input checked="" type="checkbox"/> 2X cDNA Synthesis Master Mix	0.5 ml
<input checked="" type="checkbox"/> AffinityScript RT/RNase Block Enzyme Mixture	0.05 ml
<input checked="" type="checkbox"/> 2X Brilliant II QPCR Master Mix	2 x 2.5 ml
<input checked="" type="checkbox"/> Reference Dye	0.1 ml (100 µl 1 mM)

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

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

## Section 2. Hazard identification

### Classification of the substance or mixture

**AffinityScript RT/RNase Block Enzyme Mixture**

H320 EYE IRRITATION - Category 2B

**2X Brilliant II QPCR Master Mix**

H320 EYE IRRITATION - Category 2B

### GHS label elements

## Section 2. Hazard identification

<b>Signal word</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	No signal word. No signal word. No signal word. No signal word. Warning Warning No signal word.
<b>Hazard statements</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	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. H320 - Causes eye irritation. H320 - Causes eye irritation. No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Response</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture  2X Brilliant II QPCR Master Mix  Reference Dye	Not applicable. Not applicable. Not applicable. Not applicable. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. Not applicable.
<b>Storage</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.

## Section 2. Hazard identification

<b>Disposal</b>	:	<input checked="" type="checkbox"/> RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
<b>Supplemental label elements</b>	:	<input checked="" type="checkbox"/> RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	None known. None known. None known. None known. None known. None known. None known.
<b>Other hazards which do not result in classification</b>	:	<input checked="" type="checkbox"/> RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	None known. None known. None known. None known. None known. None known. None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	:	<input checked="" type="checkbox"/> RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	Substance Mixture Mixture Mixture Mixture Mixture Mixture
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Ingredient name	Synonyms	% (w/w)	CAS number
<input checked="" type="checkbox"/> RNase-Free Water			
water	Water	100	7732-18-5
<b>AffinityScript RT/RNase Block Enzyme Mixture</b>			
Glycerol	Glycerol	≥30 - ≤60	56-81-5
<b>2X Brilliant II QPCR Master Mix</b>			
Glycerol	Glycerol	≥10 - ≤30	56-81-5

## Section 3. Composition/information on ingredients

Magnesium chloride	Magnesium chloride	≥0.1 - ≤1	7786-30-3
Polyoxyethylene octyl phenyl ether	Triton X-100	≤0.1	9002-93-1
<b>Reference Dye</b>			
Potassium chloride	Potassium Chloride	≥1 - ≤5	7447-40-7

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

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

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

## Section 4. First-aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	: 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.
	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.
	2X cDNA Synthesis Master Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	AffinityScript RT/RNase Block Enzyme Mixture	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.
	2X Brilliant II QPCR Master Mix	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.
	Reference Dye	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.
<b>Inhalation</b>	: RNase-Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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.
	2X cDNA Synthesis Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical

## Section 4. First-aid measures

	AffinityScript RT/RNase Block Enzyme Mixture	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. 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.
	2X Brilliant II QPCR Master Mix	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.
	Reference Dye	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.
<b>Skin contact</b>	: RNase-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	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.
	2X cDNA Synthesis Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	AffinityScript RT/RNase Block Enzyme Mixture	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.
	2X Brilliant II QPCR Master Mix	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.
	Reference Dye	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

## Section 4. First-aid measures

<b>Ingestion</b>	: RNase-Free Water	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Oligo (dT) Primer	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Random Primers	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	2X cDNA Synthesis Master Mix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	AffinityScript RT/RNase Block Enzyme Mixture	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	2X Brilliant II QPCR Master Mix	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Reference Dye	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

## Section 4. First-aid measures

<b>Eye contact</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	Causes eye irritation.
		2X Brilliant II QPCR Master Mix	Causes eye irritation.
		Reference Dye	No known significant effects or critical hazards.
<b>Inhalation</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.
<b>Skin contact</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.
<b>Ingestion</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Eye contact</b>	:	RNase-Free Water	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		2X cDNA Synthesis Master Mix	No specific data.
		AffinityScript RT/RNase Block Enzyme Mixture	Adverse symptoms may include the following: irritation watering redness
		2X Brilliant II QPCR Master Mix	Adverse symptoms may include the following: irritation watering redness
		Reference Dye	No specific data.

## Section 4. First-aid measures

<b>Inhalation</b>	:	RNAse-Free Water	No specific data.	
		Oligo (dT) Primer	No specific data.	
		Random Primers	No specific data.	
		2X cDNA Synthesis Master Mix	No specific data.	
		AffinityScript RT/RNase	No specific data.	
		Block Enzyme Mixture		
		2X Brilliant II QPCR Master Mix	No specific data.	
		Reference Dye	No specific data.	
	<b>Skin contact</b>	:	RNAse-Free Water	No specific data.
			Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.	
		2X cDNA Synthesis Master Mix	No specific data.	
		AffinityScript RT/RNase	No specific data.	
		Block Enzyme Mixture		
		2X Brilliant II QPCR Master Mix	No specific data.	
		Reference Dye	No specific data.	
<b>Ingestion</b>		:	RNAse-Free Water	No specific data.
			Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.	
		2X cDNA Synthesis Master Mix	No specific data.	
		AffinityScript RT/RNase	No specific data.	
		Block Enzyme Mixture		
		2X Brilliant II QPCR Master Mix	No specific data.	
		Reference Dye	No specific data.	

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

<b>Notes to physician</b>	:	RNAse-Free Water	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.
		2X cDNA Synthesis Master Mix	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.
		AffinityScript RT/RNase Block Enzyme Mixture	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		2X Brilliant II QPCR Master Mix	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
		Reference Dye	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.

## Section 4. First-aid measures

<b>Specific treatments</b>	:	RNAse-Free Water	No specific treatment.
		Oligo (dT) Primer	No specific treatment.
		Random Primers	No specific treatment.
		2X cDNA Synthesis Master Mix	No specific treatment.
		AffinityScript RT/RNase Block Enzyme Mixture	No specific treatment.
		2X Brilliant II QPCR Master Mix	No specific treatment.
		Reference Dye	No specific treatment.
<b>Protection of first-aiders</b>	:	RNAse-Free Water	No action shall be taken involving any personal risk or without suitable training.
		Oligo (dT) Primer	No action shall be taken involving any personal risk or without suitable training.
		Random Primers	No action shall be taken involving any personal risk or without suitable training.
		2X cDNA Synthesis Master Mix	No action shall be taken involving any personal risk or without suitable training.
		AffinityScript RT/RNase Block Enzyme Mixture	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.
		2X Brilliant II QPCR Master Mix	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.
		Reference Dye	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	:	RNAse-Free Water	Use an extinguishing agent suitable for the surrounding fire.
		Oligo (dT) Primer	Use an extinguishing agent suitable for the surrounding fire.
		Random Primers	Use an extinguishing agent suitable for the surrounding fire.
		2X cDNA Synthesis Master Mix	Use an extinguishing agent suitable for the surrounding fire.
		AffinityScript RT/RNase Block Enzyme Mixture	Use an extinguishing agent suitable for the surrounding fire.
		2X Brilliant II QPCR Master Mix	Use an extinguishing agent suitable for the surrounding fire.
		Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	:	RNAse-Free Water	None known.
		Oligo (dT) Primer	None known.
		Random Primers	None known.
		2X cDNA Synthesis Master Mix	None known.
		AffinityScript RT/RNase Block Enzyme Mixture	None known.
		2X Brilliant II QPCR Master Mix	None known.
		Reference Dye	None known.

## Section 5. Fire-fighting measures

<b>Specific hazards arising from the chemical</b>	: RNase-Free Water	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.
	2X cDNA Synthesis Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	AffinityScript RT/RNase Block Enzyme Mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
	2X Brilliant II QPCR Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: RNase-Free Water	No specific data.
	Oligo (dT) Primer	No specific data.
	Random Primers	No specific data.
	2X cDNA Synthesis Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
	AffinityScript RT/RNase Block Enzyme Mixture	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	2X Brilliant II QPCR Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
<b>Special protective actions for fire-fighters</b>	: RNase-Free Water	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	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.
	2X cDNA Synthesis Master Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	AffinityScript RT/RNase Block Enzyme Mixture	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.

## Section 5. Fire-fighting measures

	2X Brilliant II QPCR Master Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Reference Dye	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>	: 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.
	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.
	2X cDNA Synthesis Master Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	AffinityScript RT/RNase Block Enzyme Mixture	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	2X Brilliant II QPCR Master Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Reference Dye	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: RNase-Free Water	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	Oligo (dT) Primer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	Random Primers	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	2X cDNA Synthesis Master Mix	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding

## Section 6. Accidental release measures

AffinityScript RT/RNase Block Enzyme Mixture	<p>areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</p> <p>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.</p>
2X Brilliant II QPCR Master Mix	<p>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.</p>
Reference Dye	<p>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.</p>
<b>For emergency responders</b> : RNase-Free Water	<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>
Oligo (dT) Primer	<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>
Random Primers	<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>
2X cDNA Synthesis Master Mix	<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>
AffinityScript RT/RNase Block Enzyme Mixture	<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>
2X Brilliant II QPCR Master Mix	<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>
Reference Dye	<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>

## Section 6. Accidental release measures

<b>Environmental precautions</b>	: RNase-Free Water	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Oligo (dT) Primer	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Random Primers	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	2X cDNA Synthesis Master Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	AffinityScript RT/RNase Block Enzyme Mixture	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).
	2X Brilliant II QPCR Master Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Reference Dye	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

<b>Methods for cleaning up</b>	: RNase-Free Water	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	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.
	2X cDNA Synthesis Master Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container.


## Section 6. Accidental release measures

AffinityScript RT/RNase Block Enzyme Mixture	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.
2X Brilliant II QPCR Master Mix	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Reference Dye	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

### Precautions for safe handling

#### Protective measures

:  RNase-Free Water	Put on appropriate personal protective equipment (see Section 8).
Oligo (dT) Primer	Put on appropriate personal protective equipment (see Section 8).
Random Primers	Put on appropriate personal protective equipment (see Section 8).
2X cDNA Synthesis Master Mix	Put on appropriate personal protective equipment (see Section 8).
AffinityScript RT/RNase Block Enzyme Mixture	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.
2X Brilliant II QPCR Master Mix	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.
Reference Dye	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.
Oligo (dT) Primer	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

## Section 7. Handling and storage

Random Primers	before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
2X cDNA Synthesis Master Mix	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 RT/RNase Block Enzyme Mixture	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.
2X Brilliant II QPCR Master Mix	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.
Reference Dye	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : RNase-Free Water

Oligo (dT) Primer	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. 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
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## Section 7. Handling and storage

Random Primers	environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
2X cDNA Synthesis Master Mix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
AffinityScript RT/RNase Block Enzyme Mixture	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
2X Brilliant II QPCR Master Mix	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Reference Dye	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### [Control parameters](#)

### [Occupational exposure limits](#)

Ingredient name	Exposure limits
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	<b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 10 mg/m <sup>3</sup> 8 hours. Form: Mist <b>CA Quebec Provincial (Canada, 6/2022).</b> TWAEV: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m <sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA British Columbia Provincial (Canada, 6/2022).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total mist
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	<b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 10 mg/m <sup>3</sup> 8 hours. Form: Mist <b>CA Quebec Provincial (Canada, 6/2022).</b> TWAEV: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m <sup>3</sup> 15 minutes. Form: mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: mist <b>CA British Columbia Provincial (Canada, 6/2022).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: respirable mist TWA: 10 mg/m <sup>3</sup> 8 hours. Form: total mist

### [Biological exposure indices](#)

No exposure indices known.

### [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: safety glasses with side-shields.

## Section 8. Exposure controls/personal protection

### Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

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

### Appearance

<b>Physical state</b>	:	RNase-Free Water	Liquid.		
		Oligo (dT) Primer	Liquid.		
		Random Primers	Liquid.		
		2X cDNA Synthesis Master Mix	Liquid.		
		AffinityScript RT/RNase Block Enzyme Mixture	Liquid.		
		2X Brilliant II QPCR Master Mix	Liquid.		
		Reference Dye	Liquid.		
		<b>Color</b>	:	RNase-Free Water	Colorless.
				Oligo (dT) Primer	Not available.
				Random Primers	Not available.
<b>Odor</b>	:	2X cDNA Synthesis Master Mix	Not available.		
		AffinityScript RT/RNase Block Enzyme Mixture	Not available.		
		2X Brilliant II QPCR Master Mix	Not available.		
		Reference Dye	Not available.		
		<b>Odor</b>	:	RNase-Free Water	Odorless.
				Oligo (dT) Primer	Not available.
				Random Primers	Not available.
				2X cDNA Synthesis Master Mix	Not available.
				AffinityScript RT/RNase Block Enzyme Mixture	Not available.
				2X Brilliant II QPCR Master Mix	Not available.
Reference Dye	Not available.				

## Section 9. Physical and chemical properties and safety characteristics

**Odor threshold** :

RNase-Free Water	Not available.
Oligo (dT) Primer	Not available.
Random Primers	Not available.
2X cDNA Synthesis Master Mix	Not available.
AffinityScript RT/RNase Block Enzyme Mixture	Not available.
2X Brilliant II QPCR Master Mix	Not available.
Reference Dye	Not available.

**pH** :

RNase-Free Water	7
Oligo (dT) Primer	7.5
Random Primers	7.5
2X cDNA Synthesis Master Mix	Not available.
AffinityScript RT/RNase Block Enzyme Mixture	8
2X Brilliant II QPCR Master Mix	8
Reference Dye	8

**Melting point/freezing point** :

RNase-Free Water	0°C (32°F)
Oligo (dT) Primer	0°C (32°F)
Random Primers	0°C (32°F)
2X cDNA Synthesis Master Mix	0°C (32°F)
AffinityScript RT/RNase Block Enzyme Mixture	Not available.
2X Brilliant II QPCR Master Mix	Not available.
Reference Dye	Not available.

**Boiling point, initial boiling point, and boiling range** :

RNase-Free Water	100°C (212°F)
Oligo (dT) Primer	100°C (212°F)
Random Primers	100°C (212°F)
2X cDNA Synthesis Master Mix	100°C (212°F)
AffinityScript RT/RNase Block Enzyme Mixture	Not available.
2X Brilliant II QPCR Master Mix	Not available.
Reference Dye	Not available.

**Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
<b>AffinityScript RT/RNase Block Enzyme Mixture</b>						
Glycerol	-	-	-	177	350.6	-
<b>2X Brilliant II QPCR Master Mix</b>						
Glycerol	-	-	-	177	350.6	-

## Section 9. Physical and chemical properties and safety characteristics

<b>Evaporation rate</b>	:	RNase-Free Water	Not available.
		Oligo (dT) Primer	Not available.
		Random Primers	Not available.
		2X cDNA Synthesis Master Mix	Not available.
		AffinityScript RT/RNase Block Enzyme Mixture	Not available.
		2X Brilliant II QPCR Master Mix	Not available.
		Reference Dye	Not available.
<b>Flammability</b>	:	RNase-Free Water	Not applicable.
		Oligo (dT) Primer	Not applicable.
		Random Primers	Not applicable.
		2X cDNA Synthesis Master Mix	Not applicable.
		AffinityScript RT/RNase Block Enzyme Mixture	Not applicable.
		2X Brilliant II QPCR Master Mix	Not applicable.
		Reference Dye	Not applicable.
<b>Lower and upper explosion limit/flammability limit</b>	:	RNase-Free Water	Not available.
		Oligo (dT) Primer	Not available.
		Random Primers	Not available.
		2X cDNA Synthesis Master Mix	Not available.
		AffinityScript RT/RNase Block Enzyme Mixture	Not available.
		2X Brilliant II QPCR Master Mix	Not available.
		Reference Dye	Not available.
<b>Vapor pressure</b>	:	RNase-Free Water	2.3 kPa (17.5 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C (122°F)]

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>Oligo (dT) Primer</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>Random Primers</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>2X cDNA Synthesis Master Mix</b>						
water	17.5	2.3	-	92.258	12.3	-
<b>AffinityScript RT/RNase Block Enzyme Mixture</b>						
water	17.5	2.3	-	92.258	12.3	-

## Section 9. Physical and chemical properties and safety characteristics

Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
<b>2X Brilliant II QPCR Master Mix</b>						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
<b>Reference Dye</b>						
water	17.5	2.3	-	92.258	12.3	-

**Relative vapor density** :

RNase-Free Water	0.62 [Air = 1]
Oligo (dT) Primer	Not available.
Random Primers	Not available.
2X cDNA Synthesis Master Mix	Not available.
AffinityScript RT/RNase Block Enzyme Mixture	Not available.
2X Brilliant II QPCR Master Mix	Not available.
Reference Dye	Not available.

**Relative density** :

RNase-Free Water	1
Oligo (dT) Primer	Not available.
Random Primers	Not available.
2X cDNA Synthesis Master Mix	Not available.
AffinityScript RT/RNase Block Enzyme Mixture	Not available.
2X Brilliant II QPCR Master Mix	Not available.
Reference Dye	Not available.

**Solubility(ies)** :

Media	Result
<b>RNase-Free Water</b>	
water	Soluble
<b>Oligo (dT) Primer</b>	
water	Soluble
<b>Random Primers</b>	
water	Soluble
<b>2X cDNA Synthesis Master Mix</b>	
water	Soluble
<b>AffinityScript RT/RNase Block Enzyme Mixture</b>	
water	Soluble
<b>2X Brilliant II QPCR Master Mix</b>	
water	Soluble
<b>Reference Dye</b>	
water	Soluble

## Section 9. Physical and chemical properties and safety characteristics

<b>Partition coefficient: n-octanol/water</b>	<b>RNase-Free Water</b>	-1.38
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.
	2X cDNA Synthesis Master Mix	Not applicable.
	AffinityScript RT/RNase Block Enzyme Mixture	Not applicable.
	2X Brilliant II QPCR Master Mix	Not applicable.
	Reference Dye	Not applicable.

<b>Auto-ignition temperature</b>	<b>Ingredient name</b>	<b>°C</b>	<b>°F</b>	<b>Method</b>
	<b>AffinityScript RT/RNase Block Enzyme Mixture</b>			
	Glycerol	370	698	-
	<b>2X Brilliant II QPCR Master Mix</b>			
	Glycerol	370	698	-

<b>Decomposition temperature</b>	<b>RNase-Free Water</b>	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
	2X cDNA Synthesis Master Mix	Not available.
	AffinityScript RT/RNase Block Enzyme Mixture	Not available.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.

<b>Viscosity</b>	<b>RNase-Free Water</b>	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
	2X cDNA Synthesis Master Mix	Not available.
	AffinityScript RT/RNase Block Enzyme Mixture	Not available.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.

### Particle characteristics

<b>Median particle size</b>	<b>RNase-Free Water</b>	Not applicable.
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.
	2X cDNA Synthesis Master Mix	Not applicable.
	AffinityScript RT/RNase Block Enzyme Mixture	Not applicable.
	2X Brilliant II QPCR Master Mix	Not applicable.
	Reference Dye	Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	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.
<b>Conditions to avoid</b>	: RNase-Free Water Oligo (dT) Primer Random Primers 2X cDNA Synthesis Master Mix AffinityScript RT/RNase Block Enzyme Mixture 2X Brilliant II QPCR Master Mix Reference Dye	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

## Section 10. Stability and reactivity

<b>Incompatible materials</b>	:	RNase-Free Water	May react or be incompatible with oxidizing materials.
		Oligo (dT) Primer	May react or be incompatible with oxidizing materials.
		Random Primers	May react or be incompatible with oxidizing materials.
		2X cDNA Synthesis Master Mix	May react or be incompatible with oxidizing materials.
		AffinityScript RT/RNase Block Enzyme Mixture	May react or be incompatible with oxidizing materials.
		2X Brilliant II QPCR Master Mix	May react or be incompatible with oxidizing materials.
		Reference Dye	May react or be incompatible with oxidizing materials.
<b>Hazardous decomposition products</b>	:	RNase-Free Water	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Oligo (dT) Primer	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Random Primers	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		2X cDNA Synthesis Master Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		AffinityScript RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		2X Brilliant II QPCR Master Mix	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Reference Dye	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Magnesium chloride	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
Polyoxyethylene octyl phenyl ether	LD50 Oral	Rat	2800 mg/kg	-
	LD50 Oral	Rat	1800 mg/kg	-
<b>Reference Dye</b> Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
AffinityScript RT/RNase Block Enzyme Mixture Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
2X Brilliant II QPCR Master Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Polyoxyethylene octyl phenyl ether	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
Reference Dye Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-

### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

<ul style="list-style-type: none"> <li>• RNase-Free Water</li> <li>• Oligo (dT) Primer</li> <li>• Random Primers</li> <li>• 2X cDNA Synthesis Master Mix</li> <li>• AffinityScript RT/RNase Block Enzyme Mixture</li> <li>• 2X Brilliant II QPCR Master Mix</li> <li>• Reference Dye</li> </ul>	<ul style="list-style-type: none"> <li>• Not available.</li> <li>• Not available.</li> <li>• Not available.</li> <li>• Not available.</li> <li>• Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</li> <li>• Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.</li> <li>• Not available.</li> </ul>
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### Potential acute health effects

## Section 11. Toxicological information

<b>Eye contact</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	Causes eye irritation.
<b>Inhalation</b>	:	2X Brilliant II QPCR Master Mix	Causes eye irritation.
		Reference Dye	No known significant effects or critical hazards.
		RNase-Free Water	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.
<b>Skin contact</b>	:	2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.
		RNase-Free Water	No known significant effects or critical hazards.
<b>Ingestion</b>	:	Oligo (dT) Primer	No known significant effects or critical hazards.
		Random Primers	No known significant effects or critical hazards.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.

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

<b>Eye contact</b>	:	RNase-Free Water	No specific data.
		Oligo (dT) Primer	No specific data.
		Random Primers	No specific data.
		2X cDNA Synthesis Master Mix	No specific data.
		AffinityScript RT/RNase Block Enzyme Mixture	Adverse symptoms may include the following: irritation watering redness
		2X Brilliant II QPCR Master Mix	Adverse symptoms may include the following: irritation watering redness
		Reference Dye	No specific data.

## Section 11. Toxicological information

<b>Inhalation</b>	:	RNase-Free Water	No specific data.	
		Oligo (dT) Primer	No specific data.	
		Random Primers	No specific data.	
		2X cDNA Synthesis Master Mix	No specific data.	
		AffinityScript RT/RNase Block Enzyme Mixture	No specific data.	
		2X Brilliant II QPCR Master Mix	No specific data.	
		Reference Dye	No specific data.	
	<b>Skin contact</b>	:	RNase-Free Water	No specific data.
			Oligo (dT) Primer	No specific data.
			Random Primers	No specific data.
		2X cDNA Synthesis Master Mix	No specific data.	
		AffinityScript RT/RNase Block Enzyme Mixture	No specific data.	
		2X Brilliant II QPCR Master Mix	No specific data.	
		Reference Dye	No specific data.	
<b>Ingestion</b>		:	RNase-Free Water	No specific data.
			Oligo (dT) Primer	No specific data.
			Random Primers	No specific data.
		2X cDNA Synthesis Master Mix	No specific data.	
		AffinityScript RT/RNase Block Enzyme Mixture	No specific data.	
		2X Brilliant II QPCR Master Mix	No specific data.	
		Reference Dye	No specific data.	

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

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

<b>General</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Carcinogenicity</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
<b>Mutagenicity</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	:	RNase-Free Water	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.
		2X cDNA Synthesis Master Mix	No known significant effects or critical hazards.
		AffinityScript RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards.
		2X Brilliant II QPCR Master Mix	No known significant effects or critical hazards.
		Reference Dye	No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	12600	N/A	N/A	N/A	N/A
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	12600	N/A	N/A	N/A	N/A
Magnesium chloride	2800	2500	N/A	N/A	N/A
Polyoxyethylene octyl phenyl ether	1800	N/A	N/A	N/A	N/A
<b>Reference Dye</b> Reference Dye	70270.3	N/A	N/A	N/A	N/A
Potassium chloride	2600	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
<b>2X Brilliant II QPCR Master Mix</b> Glycerol Magnesium chloride	Acute LC50 54000 mg/l Fresh water Acute EC50 >100 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i> Algae - <i>Desmodesmus subspicatus</i>	96 hours 72 hours
	Acute EC50 180000 µg/l Fresh water	Crustaceans - <i>Eudiaptomus padanus ssp. padanus</i> - Adult	48 hours
	Acute IC50 6.8 mg/l Fresh water	Aquatic plants - <i>Lemna aequinoctialis</i>	96 hours
	Acute LC50 32000 µg/l Fresh water	Daphnia - <i>Daphnia hyalina</i> - Adult	48 hours
	Acute LC50 2120 mg/l Fresh water Acute NOEC 100 mg/l Fresh water	Fish - <i>Pimephales promelas</i> Algae - <i>Desmodesmus subspicatus</i>	96 hours 72 hours
Polyoxyethylene octyl phenyl ether	Chronic NOEC 0.1 mg/l Fresh water Acute LC50 5.85 mg/l Fresh water	Fish - <i>Cyprinus carpio</i> Crustaceans - <i>Ceriodaphnia rigaudi</i> - Neonate	35 days 48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water Chronic NOEC 0.004 mg/l Fresh water	Fish - <i>Pimephales promelas</i> Fish - <i>Gambusia holbrooki</i>	96 hours 28 days
<b>Reference Dye</b> Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 1337000 µg/l Fresh water Acute LC50 9.68 mg/l Fresh water	Algae - <i>Navicula seminulum</i> Crustaceans - <i>Pseudosida ramosa</i> - Neonate	96 hours 48 hours
	Acute LC50 93000 µg/l Fresh water Acute LC50 509.65 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> Fish - <i>Danio rerio</i>	48 hours 96 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

## Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>RNase-Free Water</b> water	-	-	Readily
<b>2X Brilliant II QPCR Master Mix</b> Polyoxyethylene octyl phenyl ether	-	-	Readily
<b>Reference Dye</b> Potassium chloride	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>RNase-Free Water</b> water	-1.38	-	Low
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> Glycerol	-1.76	-	Low
<b>2X Brilliant II QPCR Master Mix</b> Glycerol	-1.76	-	Low
Polyoxyethylene octyl phenyl ether	4.86	-	High
<b>Reference Dye</b> Potassium chloride	-0.46	-	Low

### Mobility in soil

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

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

## Section 13. Disposal considerations

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

## Section 14. Transport information

**TDG / IMDG / IATA** : Not regulated.

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

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Canada** : Not determined.

**United States** : Not determined.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 12/26/2023

**Date of previous issue** : 08/26/2020

**Version** : 7.1

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

### Procedure used to derive the classification

## Section 16. Other information

Classification	Justification
<b>AffinityScript RT/RNase Block Enzyme Mixture</b> EYE IRRITATION - Category 2B	Calculation method
<b>2X Brilliant II QPCR Master Mix</b> EYE IRRITATION - Category 2B	Calculation method

✔ Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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