

SAFETY DATA SHEET

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

Section 1. Identification

1.1 Product identifier

Product name : 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

Validation date : 2/12/2018

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

Material uses : Analytical reagent.

RNase-Free Water	1.2 ml
2X Brilliant II QPCR Master Mix	2 x 2.5 ml
Reference Dye	0.1 ml (100 µl 1 mM)
AffinityScript RT/RNase Block Enzyme Mixture	0.05 ml
2X cDNA Synthesis Master Mix	0.5 ml
Oligo (dT) Primer	0.2 ml (15 µg 100 ng/µl)
Random Primers	0.2 ml (15 µg 100 ng/µl)

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.
	: 2X Brilliant II QPCR Master Mix	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). 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
	: Reference Dye	

Section 2. Hazards identification

AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix	SDS should be retained and available for employees and other users of this product. This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). 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.
Oligo (dT) Primer	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.
Random Primers	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

2X Brilliant II QPCR Master Mix

H320 EYE IRRITATION - Category 2B

AffinityScript RT/RNase Block Enzyme Mixture

H320 EYE IRRITATION - Category 2B

Ingredients of unknown toxicity	: 2X Brilliant II QPCR Master Mix	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 10 - 30%
	Reference Dye	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
	AffinityScript RT/RNase Block Enzyme Mixture	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
	2X cDNA Synthesis Master Mix	Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%
	AffinityScript RT/RNase Block Enzyme Mixture	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 30 - 60%
	2X cDNA Synthesis Master Mix	Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
	AffinityScript RT/RNase Block Enzyme Mixture	Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%
	2X cDNA Synthesis Master Mix	Percentage of the mixture consisting of ingredient (s) of unknown oral toxicity: 1 - 10%

2.2 GHS label elements

Signal word

: RNase-Free Water	No signal word.
2X Brilliant II QPCR Master Mix	Warning
Reference Dye	No signal word.
AffinityScript RT/RNase Block Enzyme Mixture	Warning
2X cDNA Synthesis Master Mix	No signal word.
Oligo (dT) Primer	No signal word.
Random Primers	No signal word.

Section 2. Hazards identification

2.3 Other hazards

Hazards not otherwise classified	:	RNase-Free Water	None known.
		2X Brilliant II QPCR Master Mix	None known.
		Reference Dye	None known.
		AffinityScript RT/RNase Block	None known.
		Enzyme Mixture	
		2X cDNA Synthesis Master Mix	None known.
		Oligo (dT) Primer	None known.
		Random Primers	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	RNase-Free Water	Substance
		2X Brilliant II QPCR Master Mix	Mixture
		Reference Dye	Mixture
		AffinityScript RT/RNase Block	Mixture
		Enzyme Mixture	
		2X cDNA Synthesis Master Mix	Mixture
		Oligo (dT) Primer	Mixture
		Random Primers	Mixture

Ingredient name	%	CAS number
RNase-Free Water Water	100	7732-18-5
2X Brilliant II QPCR Master Mix Glycerol	≥10 - ≤25	56-81-5
Reference Dye Potassium chloride	≤5	7447-40-7
2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	1185-53-1
AffinityScript RT/RNase Block Enzyme Mixture Glycerol	≥50 - ≤75	56-81-5
2X cDNA Synthesis Master Mix 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	≤3	1185-53-1

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.
		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,

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		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 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.
	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.
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.
	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.
	AffinityScript RT/RNase Block Enzyme Mixture	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 cDNA Synthesis Master Mix	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

Section 4. First aid measures

		to be kept under medical surveillance for 48 hours.
	Oligo (dT) Primer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Random Primers	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: RNase-Free Water	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	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.
	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 cDNA Synthesis Master Mix	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.
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.
	2X Brilliant II QPCR Master Mix	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.
	Reference Dye	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

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AffinityScript RT/RNase Block Enzyme Mixture	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. 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.
2X cDNA Synthesis Master Mix	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.
Oligo (dT) Primer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Random Primers	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

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

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Inhalation	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.

Over-exposure signs/symptoms

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

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

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

Notes to physician	: RNase-Free Water	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	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.
	AffinityScript RT/RNase Block Enzyme Mixture	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.
	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.
Specific treatments	: RNase-Free Water	No specific treatment.
	2X Brilliant II QPCR Master Mix	No specific treatment.
	Reference Dye	No specific treatment.
	AffinityScript RT/RNase Block Enzyme Mixture	No specific treatment.
	2X cDNA Synthesis Master Mix	No specific treatment.
	Oligo (dT) Primer	No specific treatment.
	Random Primers	No specific treatment.
Protection of first-aiders	: RNase-Free Water	No action shall be taken involving any personal risk or without suitable training.
	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.
	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 cDNA Synthesis Master Mix	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

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

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: RNase-Free Water	In a fire or if heated, a pressure increase will occur and the container may burst.
	2X Brilliant II QPCR Master Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	Reference Dye	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 cDNA Synthesis Master Mix	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.
Hazardous thermal decomposition products	: RNase-Free Water	No specific data.
	2X Brilliant II QPCR Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides

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AffinityScript RT/RNase Block Enzyme Mixture	Decomposition products may include the following materials: carbon dioxide carbon monoxide
2X cDNA Synthesis Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
Oligo (dT) Primer Random Primers	No specific data. No specific data.

5.3 Advice for firefighters

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.
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.
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.
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.
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.

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.
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.
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.

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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.
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.

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.
2X Brilliant II QPCR Master Mix	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.
Reference Dye	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 RT/RNase Block Enzyme Mixture	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.
2X cDNA Synthesis Master Mix	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

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		<p>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>
<p>For emergency responders :</p>	<p>RNase-Free Water</p> <p>2X Brilliant II QPCR Master Mix</p> <p>Reference Dye</p> <p>AffinityScript RT/RNase Block Enzyme Mixture</p> <p>2X cDNA Synthesis Master Mix</p> <p>Oligo (dT) Primer</p> <p>Random Primers</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</p>	<p>: RNase-Free Water</p> <p>2X Brilliant II QPCR Master Mix</p> <p>Reference Dye</p> <p>AffinityScript RT/RNase Block Enzyme Mixture</p> <p>2X cDNA Synthesis Master Mix</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>

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Oligo (dT) Primer	waterways, soil or air). 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).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : RNase-Free Water

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.
AffinityScript RT/RNase Block Enzyme Mixture	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. 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.

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).
	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).
	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 cDNA Synthesis Master Mix	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).
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.
	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.
	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 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

Section 7. Handling and storage

	<p>Oligo (dT) Primer</p> <p>Random Primers</p>	<p>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. 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.</p>
<p>7.2 Conditions for safe storage, including any incompatibilities</p>	<p>: RNase-Free Water</p> <p>2X Brilliant II QPCR Master Mix</p> <p>Reference Dye</p> <p>AffinityScript RT/RNase Block Enzyme Mixture</p>	<p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been</p>

Section 7. Handling and storage

2X cDNA Synthesis Master Mix

opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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

Oligo (dT) Primer

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

Random Primers

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from 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.

7.3 Specific end use(s)

Recommendations

: RNase-Free Water	Industrial applications, Professional applications.
2X Brilliant II QPCR Master Mix	Industrial applications, Professional applications.
Reference Dye	Industrial applications, Professional applications.
AffinityScript RT/RNase Block	Industrial applications, Professional applications.
Enzyme Mixture	
2X cDNA Synthesis Master Mix	Industrial applications, Professional applications.
Oligo (dT) Primer	Industrial applications, Professional applications.
Random Primers	Industrial applications, Professional applications.

Industrial sector specific solutions

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

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
RNase-Free Water Water	None.
2X Brilliant II QPCR Master Mix 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, 6/2016). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Reference Dye Potassium chloride 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	None. None.
AffinityScript RT/RNase Block Enzyme Mixture 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, 6/2016). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
2X cDNA Synthesis Master Mix 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	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: safety glasses with side-shields.

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

Section 9. Physical and chemical properties

	RNase-Free Water	7
	2X Brilliant II QPCR Master Mix	8
	Reference Dye	8
	AffinityScript RT/RNase Block	8
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not available.
	Oligo (dT) Primer	7.5
	Random Primers	7.5
Melting point	: RNase-Free Water	0°C (32°F)
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	0°C (32°F)
	Oligo (dT) Primer	0°C (32°F)
	Random Primers	0°C (32°F)
Boiling point	: RNase-Free Water	100°C (212°F)
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	100°C (212°F)
	Oligo (dT) Primer	100°C (212°F)
	Random Primers	100°C (212°F)
Flash point	: RNase-Free Water	Not applicable.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
Evaporation rate	: RNase-Free Water	Not available.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
Flammability (solid, gas)	: RNase-Free Water	Not applicable.
	2X Brilliant II QPCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	AffinityScript RT/RNase Block	Not applicable.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not applicable.
	Oligo (dT) Primer	Not applicable.
	Random Primers	Not applicable.
Lower and upper explosive (flammable) limits	: RNase-Free Water	Not available.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.

Section 9. Physical and chemical properties

Vapor pressure	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	3.2 kPa (23.8 mm Hg) [room temperature] Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Vapor density	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	0.62 [Air = 1] Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Relative density	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	1 Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Solubility	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	-1.38 Not available. Not available. Not available. Not available. Not available. Not available. Not available.
Auto-ignition temperature	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	Not applicable. Not available. Not available. Not available. Not available. Not available. Not available. Not available.

Section 9. Physical and chemical properties

Decomposition temperature	: RNase-Free Water	Not available.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	Not available.
Viscosity	: RNase-Free Water	Not available.
	2X Brilliant II QPCR Master Mix	Not available.
	Reference Dye	Not available.
	AffinityScript RT/RNase Block	Not available.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	Not available.
	Oligo (dT) Primer	Not available.
	Random Primers	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.
	2X Brilliant II QPCR Master Mix	No specific test data related to reactivity available for this product or its ingredients.
	Reference Dye	No specific test data related to reactivity available for this product or its ingredients.
	AffinityScript RT/RNase Block	No specific test data related to reactivity available for this product or its ingredients.
	Enzyme Mixture	No specific test data related to reactivity available for this product or its ingredients.
	2X cDNA Synthesis Master Mix	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.
10.2 Chemical stability	: RNase-Free Water	The product is stable.
	2X Brilliant II QPCR Master Mix	The product is stable.
	Reference Dye	The product is stable.
	AffinityScript RT/RNase Block	The product is stable.
	Enzyme Mixture	
	2X cDNA Synthesis Master Mix	The product is stable.
	Oligo (dT) Primer	The product is stable.
	Random Primers	The product is stable.
10.3 Possibility of hazardous reactions	: RNase-Free Water	Under normal conditions of storage and use, hazardous reactions will not occur.
	2X Brilliant II QPCR Master Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	Reference Dye	Under normal conditions of storage and use, hazardous reactions will not occur.
	AffinityScript RT/RNase Block	Under normal conditions of storage and use, hazardous reactions will not occur.
	Enzyme Mixture	Under normal conditions of storage and use, hazardous reactions will not occur.
	2X cDNA Synthesis Master Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	Oligo (dT) Primer	Under normal conditions of storage and use, hazardous reactions will not occur.
	Random Primers	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

10.4 Conditions to avoid	<ul style="list-style-type: none"> : RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers 	<ul style="list-style-type: none"> No specific data. No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
10.5 Incompatible materials	<ul style="list-style-type: none"> : RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers 	<ul style="list-style-type: none"> 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.
10.6 Hazardous decomposition products	<ul style="list-style-type: none"> : RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers 	<ul style="list-style-type: none"> Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

[11.1 Information on toxicological effects](#)

[Acute toxicity](#)

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
2X Brilliant II QPCR Master Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Reference Dye Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
AffinityScript RT/RNase Block Enzyme Mixture Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

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

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)

Name	Category	Route of exposure	Target organs
Reference Dye 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation
2X cDNA Synthesis Master Mix 2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

: RNase-Free Water
2X Brilliant II QPCR Master Mix

Reference Dye

AffinityScript RT/RNase Block
Enzyme Mixture
2X cDNA Synthesis Master Mix

Oligo (dT) Primer
Random Primers

Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Routes of entry anticipated: Oral, Dermal, Inhalation.
Not available.
Not available.

Potential acute health effects

Eye contact

: RNase-Free Water
2X Brilliant II QPCR Master Mix
Reference Dye
AffinityScript RT/RNase Block
Enzyme Mixture
2X cDNA Synthesis Master Mix
Oligo (dT) Primer
Random Primers

No known significant effects or critical hazards.
Causes eye irritation.
No known significant effects or critical hazards.
Causes eye irritation.

Inhalation

: RNase-Free Water
2X Brilliant II QPCR Master Mix
Reference Dye
AffinityScript RT/RNase Block
Enzyme Mixture
2X cDNA Synthesis Master Mix
Oligo (dT) Primer
Random Primers

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

: RNase-Free Water
2X Brilliant II QPCR Master Mix
Reference Dye
AffinityScript RT/RNase Block
Enzyme Mixture
2X cDNA Synthesis Master Mix
Oligo (dT) Primer
Random Primers

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

: RNase-Free Water
2X Brilliant II QPCR Master Mix
Reference Dye
AffinityScript RT/RNase Block
Enzyme Mixture
2X cDNA Synthesis Master Mix
Oligo (dT) Primer
Random Primers

No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

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

Section 11. Toxicological information

General	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.
Carcinogenicity	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.
Mutagenicity	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.
Teratogenicity	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.
Developmental effects	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.
Fertility effects	: RNase-Free Water 2X Brilliant II QPCR Master Mix Reference Dye AffinityScript RT/RNase Block Enzyme Mixture 2X cDNA Synthesis Master Mix Oligo (dT) Primer Random Primers	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.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Reference Dye Oral	70270.3 mg/kg

Section 11. Toxicological information

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2X Brilliant II QPCR Master Mix Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
Reference Dye Potassium chloride	Acute EC50 1337000 µg/l Fresh water Acute EC50 9.24 g/L Fresh water	Algae - Navicula seminulum Algae - Desmodesmus subspicatus	96 hours 72 hours
	Acute EC50 141460 µg/l Fresh water Acute LC50 12.92 mg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Pseudosida ramosa - Neonate	48 hours 48 hours
	Acute LC50 880 mg/l Fresh water	Fish - Pimephales promelas	96 hours
AffinityScript RT/RNase Block Enzyme Mixture 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
2X Brilliant II QPCR Master Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
AffinityScript RT/RNase Block Enzyme Mixture Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RNase-Free Water Water	-	-	Readily
Reference Dye Potassium chloride	-	-	Readily

12.3 Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
RNase-Free Water Water	-1.38	-	low
2X Brilliant II QPCR Master Mix Glycerol	-1.76	-	low
Reference Dye Potassium chloride	-0.46	-	low
AffinityScript RT/RNase Block Enzyme Mixture 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. 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

DOT / TDG / Mexico / 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.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) PAIR**: Polyoxyethylene octyl phenyl ether; Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
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	: 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	EYE IRRITATION - Category 2B
	Enzyme Mixture	
	2X Brilliant II QPCR Master Mix	EYE IRRITATION - Category 2B
	Reference Dye	Not applicable.

Composition/information on ingredients

Name	%	Classification
2X cDNA Synthesis Master Mix 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≤3	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
AffinityScript RT/RNase Block Enzyme Mixture Glycerol	≥50 - ≤75	EYE IRRITATION - Category 2A
2X Brilliant II QPCR Master Mix Glycerol	≥10 - ≤25	EYE IRRITATION - Category 2A

Section 15. Regulatory information

Reference Dye Potassium chloride 2-Amino-2-(hydroxymethyl) propane-1,3-diol hydrochloride	≤5 ≤3	EYE IRRITATION - Category 2A SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
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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
- Pennsylvania** : The following components are listed: 1,2,3-PROPANETRIOL

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

Section 16. Other information

History

Date of issue : 02/12/2018
Date of previous issue : 05/16/2015
Version : 5

Procedure used to derive the classification

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

✔ Indicates information that has changed from previously issued version.

Notice to reader

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