

SAFETY DATA SHEET

Brilliant II QRT-PCR Master Mix - 1-Step

Section 1. Identification

Product identifier : Brilliant II QRT-PCR Master Mix - 1-Step
Part no. (chemical kit) : 600809
Part no. : 2X Brilliant II QRT-PCR Master Mix 600809-51
 Reference Dye 600530-53
 RT/RNase Block Enzyme Mixture 600809-52

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

Identified uses : Analytical reagent.
 2X Brilliant II QRT-PCR Master Mix 2 x 2.5 ml
 Reference Dye 0.1 ml (100 µl 1 mM)
 RT/RNase Block Enzyme Mixture 0.4 ml

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

2X Brilliant II QRT-PCR Master Mix
 H320 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

RT/RNase Block Enzyme Mixture
 H320 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B

GHS label elements

Signal word : 2X Brilliant II QRT-PCR Master Mix WARNING
 Reference Dye No signal word.
 RT/RNase Block Enzyme Mixture WARNING

Hazard statements : 2X Brilliant II QRT-PCR Master Mix H320 - Causes eye irritation.
 Reference Dye No known significant effects or critical hazards.
 RT/RNase Block Enzyme Mixture H320 - Causes eye irritation.

Precautionary statements

Prevention : 2X Brilliant II QRT-PCR Master Mix Not applicable.
 Reference Dye Not applicable.
 RT/RNase Block Enzyme Mixture Not applicable.

Section 2. Hazard(s) identification

Response	: 2X Brilliant II QRT-PCR Master Mix	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.
	Reference Dye RT/RNase Block Enzyme Mixture	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.
Storage	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not applicable. Not applicable. Not applicable.
Disposal	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not applicable. Not applicable. Not applicable.
Supplemental label elements		
Additional warning phrases	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	None known. None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Mixture Mixture Mixture
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CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
2X Brilliant II QRT-PCR Master Mix		
Glycerol	≥10 - ≤30	56-81-5
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	≥10 - ≤30	25322-68-3
Dimethyl sulfoxide	≤3	67-68-5
RT/RNase Block Enzyme Mixture		
Glycerol	≥30 - ≤60	56-81-5

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.

Section 3. Composition and ingredient information

The total concentration of ingredients in this product, reported or not in this section, is 100%.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	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.
Inhalation	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	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.
Skin contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	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.

Section 4. First aid measures

Ingestion	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Causes eye irritation. No known significant effects or critical hazards. Causes eye irritation.
Inhalation	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	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

Section 4. First aid measures

Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix	Adverse symptoms may include the following: irritation watering redness
	Reference Dye RT/RNase Block Enzyme Mixture	No specific data. Adverse symptoms may include the following: irritation watering redness
Inhalation	: 2X Brilliant II QRT-PCR Master Mix	No specific data.
	Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data.
Skin contact	: 2X Brilliant II QRT-PCR Master Mix	No specific data.
	Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data.
Ingestion	: 2X Brilliant II QRT-PCR Master Mix	No specific data.
	Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data.

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

Notes to physician	: 2X Brilliant II QRT-PCR 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.
	RT/RNase Block Enzyme Mixture	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: 2X Brilliant II QRT-PCR Master Mix	No specific treatment.
	Reference Dye	No specific treatment.
	RT/RNase Block Enzyme Mixture	No specific treatment.
Protection of first-aiders	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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.
	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.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media	: 2X Brilliant II QRT-PCR Master Mix	Use an extinguishing agent suitable for the surrounding fire.
	Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	RT/RNase Block Enzyme Mixture	Use an extinguishing agent suitable for the surrounding fire.
	: 2X Brilliant II QRT-PCR Master Mix	None known.
Specific hazards arising from the chemical	Reference Dye	None known.
	RT/RNase Block Enzyme Mixture	None known.
Hazardous thermal decomposition products	: 2X Brilliant II QRT-PCR 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.
Special protective actions for fire-fighters	RT/RNase Block Enzyme Mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
	: 2X Brilliant II QRT-PCR Master Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides
Special protective equipment for fire-fighters	Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	RT/RNase Block Enzyme Mixture	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	: 2X Brilliant II QRT-PCR 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.
Special protective equipment for fire-fighters	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 Brilliant II QRT-PCR 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.
Special protective equipment for fire-fighters	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.
	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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR 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 spilt material. Avoid breathing vapour 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 spilt material. Put on appropriate personal protective equipment.
	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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: 2X Brilliant II QRT-PCR Master Mix	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Reference Dye	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	RT/RNase Block Enzyme Mixture	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	: 2X Brilliant II QRT-PCR Master Mix	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Reference Dye	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	RT/RNase Block Enzyme Mixture	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up	: 2X Brilliant II QRT-PCR 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.

Section 6. Accidental release measures

RT/RNase Block Enzyme
Mixture

Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Brilliant II QRT-PCR
Master Mix

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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).

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 vapour 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.

Advice on general occupational hygiene

: 2X Brilliant II QRT-PCR
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.

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.

Conditions for safe storage, including any incompatibilities

: 2X Brilliant II QRT-PCR
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 unlabelled containers. Use appropriate containment to avoid

Section 7. Handling and storage

Reference Dye

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

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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls and personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
<p>2X Brilliant II QRT-PCR Master Mix Glycerol</p> <p>Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated</p> <p>Dimethyl sulfoxide</p> <p>RT/RNase Block Enzyme Mixture Glycerol</p>	<p>Safe Work Australia (Australia, 10/2022). TWA: 10 mg/m³ 8 hours.</p> <p>DFG MAC-values list (Germany, 7/2023). [Polyethylene glycol (average molecular weight 200 – 600)] PEAK: 400 mg/m³, 4 times per shift, 15 minutes. Form: inhalable fraction TWA: 200 mg/m³ 8 hours. Form: inhalable fraction</p> <p>DFG MAC-values list (Germany, 7/2023). Absorbed through skin. PEAK: 320 mg/m³, 4 times per shift, 15 minutes. TWA: 160 mg/m³ 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 50 ppm 8 hours.</p> <p>Safe Work Australia (Australia, 10/2022). TWA: 10 mg/m³ 8 hours.</p>

[Biological exposure indices](#)

No exposure indices known.

[Appropriate engineering controls](#)

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

Section 8. Exposure controls and personal protection

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

Individual protection measures

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

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

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

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

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

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

Physical state	: 2X Brilliant II QRT-PCR Master Mix	Liquid.
	Reference Dye	Liquid.
	RT/RNase Block Enzyme Mixture	Liquid.
Colour	: 2X Brilliant II QRT-PCR Master Mix	Not available.
	Reference Dye	Not available.
	RT/RNase Block Enzyme Mixture	Not available.
Odour	: 2X Brilliant II QRT-PCR Master Mix	Not available.
	Reference Dye	Not available.
	RT/RNase Block Enzyme Mixture	Not available.

Section 9. Physical and chemical properties and safety characteristics

Odour threshold : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

pH : 2X Brilliant II QRT-PCR Master Mix 8
Reference Dye 8
RT/RNase Block Enzyme Mixture 8

Melting point/freezing point : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Boiling point, initial boiling point, and boiling range : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Flash point :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
2X Brilliant II QRT-PCR Master Mix						
Dimethyl sulfoxide	87	188.6	ASTM D 93	87	188.6	-
RT/RNase Block Enzyme Mixture						
Glycerol	-	-	-	177	350.6	-

Evaporation rate : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Flammability : 2X Brilliant II QRT-PCR Master Mix Not applicable.
Reference Dye Not applicable.
RT/RNase Block Enzyme Mixture Not applicable.

Lower and upper explosion limit/flammability limit : 2X Brilliant II QRT-PCR Master Mix Not available.
Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2X Brilliant II QRT-PCR Master Mix						
water	17.5	2.3	-	92.258	12.3	-
Dimethyl sulfoxide	0.42	0.056	EU A.4	-	-	-

Section 9. Physical and chemical properties and safety characteristics

Reference Dye							
water	17.5	2.3	-	92.258	12.3	-	
RT/RNase Block Enzyme Mixture							
water	17.5	2.3	-	92.258	12.3	-	
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-	

Relative vapour density : 2X Brilliant II QRT-PCR Master Mix Not available.

Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Relative density : 2X Brilliant II QRT-PCR Master Mix Not available.

Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Solubility(ies)

Media	Result
2X Brilliant II QRT-PCR Master Mix	
water	Soluble
Reference Dye	
water	Soluble
RT/RNase Block Enzyme Mixture	
water	Soluble

Partition coefficient: n-octanol/water : 2X Brilliant II QRT-PCR Master Mix Not applicable.

Reference Dye Not applicable.
RT/RNase Block Enzyme Mixture Not applicable.

Auto-ignition temperature

Ingredient name	°C	°F	Method
2X Brilliant II QRT-PCR Master Mix			
Dimethyl sulfoxide	300 to 302	572 to 575.6	-
RT/RNase Block Enzyme Mixture			
Glycerol	370	698	-

Decomposition temperature : 2X Brilliant II QRT-PCR Master Mix Not available.

Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Viscosity : 2X Brilliant II QRT-PCR Master Mix Not available.

Reference Dye Not available.
RT/RNase Block Enzyme Mixture Not available.

Particle characteristics

Section 9. Physical and chemical properties and safety characteristics

Median particle size	: 2X Brilliant II QRT-PCR Master Mix	Not applicable.
	Reference Dye	Not applicable.
	RT/RNase Block Enzyme Mixture	Not applicable.

Section 10. Stability and reactivity

Reactivity	: 2X Brilliant II QRT-PCR 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.
	RT/RNase Block Enzyme Mixture	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: 2X Brilliant II QRT-PCR Master Mix	The product is stable.
	Reference Dye	The product is stable.
	RT/RNase Block Enzyme Mixture	The product is stable.
Possibility of hazardous reactions	: 2X Brilliant II QRT-PCR 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.
	RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: 2X Brilliant II QRT-PCR Master Mix	No specific data.
	Reference Dye	No specific data.
	RT/RNase Block Enzyme Mixture	No specific data.
Incompatible materials	: 2X Brilliant II QRT-PCR Master Mix	May react or be incompatible with oxidising materials.
	Reference Dye	May react or be incompatible with oxidising materials.
	RT/RNase Block Enzyme Mixture	May react or be incompatible with oxidising materials.
Hazardous decomposition products	: 2X Brilliant II QRT-PCR 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.
	RT/RNase Block Enzyme Mixture	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
2X Brilliant II QRT-PCR Master Mix				
Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Dimethyl sulfoxide	LD50 Dermal	Rat	40000 mg/kg	-
	LD50 Oral	Rat	14500 mg/kg	-
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 QRT-PCR Master Mix					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Dimethyl sulfoxide	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
RT/RNase Block Enzyme Mixture					
Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitisation

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.

Section 11. Toxicological information

Information on likely routes of exposure	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
<u>Potential acute health effects</u>		
Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Causes eye irritation. No known significant effects or critical hazards. Causes eye irritation.
Inhalation	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	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

Eye contact	: <input checked="" type="checkbox"/> Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	Adverse symptoms may include the following: irritation watering redness No specific data. Adverse symptoms may include the following: irritation watering redness
Inhalation	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.
Skin contact	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.
Ingestion	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No specific data. No specific data. No specific data.

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

Short term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: 2X Brilliant II QRT-PCR Master Mix Reference Dye RT/RNase Block Enzyme Mixture	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

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
2X Brilliant II QRT-PCR Master Mix					
Glycerol	12600	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-Ethane-1,2-diol, ethoxylated	28000	N/A	N/A	N/A	N/A
Dimethyl sulfoxide	14500	40000	N/A	N/A	N/A
RT/RNase Block Enzyme Mixture					
Glycerol	12600	N/A	N/A	N/A	N/A

Other information : RT/RNase Block Enzyme Mixture Adverse symptoms may include the following: May cause skin sensitisation.

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
2X Brilliant II QRT-PCR Master Mix Glycerol Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	Acute LC50 54000 mg/l Fresh water Acute EC50 >100 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i> Daphnia - <i>Daphnia magna</i>	96 hours 48 hours
Dimethyl sulfoxide	Acute LC50 >1000000 μ g/l Fresh water Acute LC50 25000 ppm Fresh water	Fish - <i>Salmo salar</i> - Parr Daphnia - <i>Daphnia magna</i> - Neonate	96 hours 48 hours
RT/RNase Block Enzyme Mixture Glycerol	Acute LC50 34000000 μ g/l Fresh water Chronic NOEC 100 ul/L Marine water Chronic NOEC 100 ul/L Fresh water	Fish - <i>Pimephales promelas</i> Algae - <i>Ulva lactuca</i> Daphnia - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 72 hours 21 days
RT/RNase Block Enzyme Mixture Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2X Brilliant II QRT-PCR Master Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	OECD 301D Ready Biodegradability - Closed Bottle Test	74.85 % - Readily - 28 days	4 mg/l	-
Dimethyl sulfoxide	OECD 301D Ready Biodegradability - Closed Bottle Test	31 % - Not readily - 28 days	-	-
RT/RNase Block Enzyme Mixture Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2X Brilliant II QRT-PCR Master Mix Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	-	-	Readily
Dimethyl sulfoxide	-	-	Not readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
2X Brilliant II QRT-PCR Master Mix			
Glycerol	-1.76	-	Low
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	-	3.2	Low
Dimethyl sulfoxide	-1.35	3.16	Low
RT/RNase Block Enzyme Mixture			
Glycerol	-1.76	-	Low

Mobility in soil

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

Section 14. Transport information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code .

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

Standard for the Uniform Scheduling of Medicines and Poisons

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Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Section 15. Regulatory information

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.
New Zealand : Not determined.
United States : Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 24/07/2024

Date of previous issue : 15/07/2021

Version : 8

Key to abbreviations

: ADG = Australian Dangerous Goods
 : ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 : ATE = Acute Toxicity Estimate
 : BCF = Bioconcentration Factor
 : GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 : 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
 : SUSMP = Standard Uniform Schedule of Medicine and Poisons
 : UN = United Nations

Procedure used to derive the classification

Classification	Justification
2X Brilliant II QRT-PCR Master Mix SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method
RT/RNase Block Enzyme Mixture SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B	Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

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