SAFETY DATA SHEET
Brilliant II SYBR Green QPCR Master Mix - 10-pack, Part Number 600831

Section 1. Identification

Product identifier : Brilliant II SYBR Green QPCR Master Mix - 10-pack, Part Number 600831
Part No. (Chemical Kit) : 600831
Part No. : 2× Brilliant II SYBR Green QPCR Master Mix 600828-51
Reference Dye 600530-53

Relevant identified uses of the substance or mixture and uses advised against
Analytical reagent.

2× Brilliant II SYBR Green QPCR Master Mix 5 ml (2.5 ml / Tube)
Reference Dye 0.1 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
Not classified.

2× Brilliant II SYBR Green QPCR Master Mix
Reference Dye
Not applicable.

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%

2× Brilliant II SYBR Green QPCR Master Mix
Reference Dye
Not applicable.

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

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Version : 3.01
Section 2. Hazard(s) identification

Disposal:
Brilliant II SYBR Green QPCR Master Mix
Not applicable.
Reference Dye
Not applicable.

Supplemental label elements:
Brilliant II SYBR Green QPCR Master Mix
Not applicable.
Reference Dye
Not applicable.

Other hazards which do not result in classification:
Brilliant II SYBR Green QPCR Master Mix
None known.
Reference Dye
None known.

Section 3. Composition and ingredient information

Substance/mixture:
Brilliant II SYBR Green QPCR Master Mix
Mixture
Reference Dye
Mixture

CAS number/other identifiers:

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>% (w/w)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II SYBR Green QPCR Master Mix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glycerol</td>
<td>≥10 - ≤30</td>
<td>56-81-5</td>
</tr>
</tbody>
</table>

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

Description of necessary first aid measures:

Eye contact:
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:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact:
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion:
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.
Section 4. First aid measures

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 the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No known significant effects or critical hazards.

Inhalation: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No known significant effects or critical hazards.

Skin contact: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No known significant effects or critical hazards.

Ingestion: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No specific data.

Inhalation: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No specific data.

Skin contact: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No specific data.

Ingestion: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No specific data.

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

Notes to physician: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

Specific treatments: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No specific treatment.

Protection of first-aiders: Brilliant II SYBR Green QPCR Master Mix
Reference Dye
No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)
Section 5. Firefighting measures

Extinguishing media

Suitable extinguishing media: 2× Brilliant II SYBR Green QPCR Master Mix
Reference Dye

Use an extinguishing agent suitable for the surrounding fire.
Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: 2× Brilliant II SYBR Green QPCR Master Mix
Reference Dye

None known.

Specific hazards arising from the chemical: 2× Brilliant II SYBR Green QPCR Master Mix
Reference Dye

In a fire or if heated, a pressure increase will occur and the container may burst.
In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products: 2× Brilliant II SYBR Green QPCR Master Mix

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides

Reference Dye
Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters: 2× Brilliant II SYBR Green QPCR Master Mix
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: 2× Brilliant II SYBR Green QPCR Master Mix
Reference Dye

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

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: 2× Brilliant II SYBR Green QPCR Master Mix
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 spill material. Put on appropriate personal protective equipment.

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 spill material. Put on appropriate personal protective equipment.
Section 6. Accidental release measures

For emergency responders: Brilliant II SYBR Green QPCR Master Mix 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".

Environmental precautions: Brilliant II SYBR Green QPCR Master Mix 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).

Methods for cleaning up: Brilliant II SYBR Green QPCR Master Mix Reference Dye

For emergency responders: Brilliant II SYBR Green QPCR Master Mix 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".

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).

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.

Methods and material for containment and cleaning up

Methods for cleaning up: Brilliant II SYBR Green QPCR Master Mix Reference Dye

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Brilliant II SYBR Green QPCR Master Mix Reference Dye

Put on appropriate personal protective equipment (see Section 8). Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene: Brilliant II SYBR Green QPCR Master Mix 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.

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.
Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities

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

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

Section 8. Exposure controls and personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II SYBR Green QPCR Master Mix</td>
<td>Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Glycerol</td>
<td></td>
</tr>
</tbody>
</table>

**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**

**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.
Section 8. Exposure controls and personal protection

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

Appearance

Physical state: Brilliant II SYBR Green QPCR Master Mix Liquid.
Reference Dye Liquid.

Colour: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye Not available.

Odour: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye Not available.

Odour threshold: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye Not available.

pH: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye 8

Melting point: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye 0°C (32°F)

Boiling point: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye 100°C (212°F)

Flash point:

Evaporation rate:

Flammability (solid, gas):

Lower and upper explosive (flammable) limits:

Vapour pressure:

Vapour density:

Relative density:

Solubility: 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: Brilliant II SYBR Green Not available.
QPCR Master Mix Not available.
Reference Dye Not available.
Section 9. Physical and chemical properties

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: No specific data.

Incompatible materials: May react or be incompatible with oxidising materials.

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II SYBR Green QPCR Master Mix Glycerol</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12600 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II SYBR Green QPCR Master Mix Glycerol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 milligrams</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitisation

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Date of previous issue: 28/04/2014
Version: 3.01
Section 11. Toxicological information

Not available.

**Mutagenicity**
Not available.

**Carcinogenicity**
Not available.

**Reproductive toxicity**
Not available.

**Teratogenicity**
Not available.

**Specific target organ toxicity (single exposure)**
Not available.

**Specific target organ toxicity (repeated exposure)**
Not available.

**Aspiration hazard**
Not available.

**Information on likely routes of exposure**

- **Inhalation**:
  - 2× Brilliant II SYBR Green QPCR Master Mix
  - Reference Dye
  - Routes of entry anticipated: Oral, Dermal, Inhalation.

**Potential acute health effects**

- **Eye contact**:
  - 2× Brilliant II SYBR Green QPCR Master Mix
  - Reference Dye
  - No known significant effects or critical hazards.

- **Inhalation**:
  - 2× Brilliant II SYBR Green QPCR Master Mix
  - Reference Dye
  - No known significant effects or critical hazards.

- **Skin contact**:
  - 2× Brilliant II SYBR Green QPCR Master Mix
  - Reference Dye
  - No known significant effects or critical hazards.

- **Ingestion**:
  - 2× Brilliant II SYBR Green QPCR Master Mix
  - Reference Dye
  - No known significant effects or critical hazards.

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

- **Eye contact**:
  - No specific data.

- **Inhalation**:
  - No specific data.

- **Skin contact**:
  - No specific data.

- **Ingestion**:
  - No specific data.

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

**Short term exposure**

- **Potential immediate effects**:
  - Not available.

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Section 11. Toxicological information

Potential delayed effects : Not available.
Long term exposure
Potential immediate effects : Not available.
Potential delayed effects : Not available.
Potential chronic health effects
Not available.

General : Brilliant II SYBR Green QPCR Master Mix
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Carcinogenicity : Brilliant II SYBR Green QPCR Master Mix
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Mutagenicity : Brilliant II SYBR Green QPCR Master Mix
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Teratogenicity : Brilliant II SYBR Green QPCR Master Mix
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Developmental effects : Brilliant II SYBR Green QPCR Master Mix
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Fertility effects : Brilliant II SYBR Green QPCR Master Mix
No known significant effects or critical hazards.
Reference Dye
No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Section 12. Ecological information

Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II SYBR Green QPCR Master Mix Glycerol</td>
<td>Acute LC50 54000 mg/l Fresh water</td>
<td>Fish - Oncorhynchus mykiss</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant II SYBR Green QPCR Master Mix Glycerol</td>
<td>-1.76</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil
Soil/water partition coefficient (K_{oc}) : Not available.
### Section 12. Ecological information

**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. 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

**Regulatory 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 Annex II of Marpol and the IBC Code**: Not available.

### Section 15. Regulatory information

- **Standard Uniform Schedule of Medicine and Poisons**: 6
- **Model Work Health and Safety Regulations - Scheduled Substances**: No listed substance
- **Australia inventory (AICS)**: Not determined.
- **Chemical Weapon Convention List Schedules I, II & III Chemicals**: Not listed.
- **Stockholm Convention on Persistent Organic Pollutants**: Not listed.
- **UNECE Aarhus Protocol on POPs and Heavy Metals**: Not listed.

**International lists**

- **National inventory**
  - Canada: Not determined.
  - China: All components are listed or exempted.
  - Europe: Not determined.

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Section 15. Regulatory information

Malaysia: Not determined.
New Zealand: Not determined.
Philippines: Not determined.
Republic of Korea: Not determined.
Taiwan: Not determined.
Turkey: Not determined.
United States: Not determined.

Section 16. Any other relevant information

History
Date of issue/Date of revision: 29/02/2016
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Key to abbreviations: ADG = Australian Dangerous Goods
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
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified</td>
<td></td>
</tr>
</tbody>
</table>

References: Not available.

笑道: Indicates information that has changed from previously issued version.

Notice to reader

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