

SAFETY DATA SHEET



High-Specificity miRNA QPCR Core Reagent Kit, Part Number 600545

Section 1. Identification

Product identifier	: High-Specificity miRNA QPCR Core Reagent Kit, Part Number 600545		
Part No. (Chemical Kit)	: 600545		
Part No.	Reference Dye	600530-53	
	20X EvaGreen	600545-51	
	PCR Enzyme Blend	600545-52	
	20 mM dNTP Mix (5 mM each dNTP)	600545-53	
	10X Core PCR Buffer	600545-54	
	50 mM Magnesium Chloride	600545-55	

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

Analytical reagent.

Reference Dye	0.1 ml
20X EvaGreen	0.25 ml
PCR Enzyme Blend	0.1 ml
20 mM dNTP Mix (5 mM each dNTP)	0.2 ml
10X Core PCR Buffer	0.5 ml
50 mM Magnesium Chloride	0.55 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.

Reference Dye	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%
20X EvaGreen	Not applicable.
PCR Enzyme Blend	Not applicable.
20 mM dNTP Mix (5 mM each dNTP)	Not applicable.
10X Core PCR Buffer	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%
50 mM Magnesium Chloride	Not applicable.
Reference Dye	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%
20X EvaGreen	Not applicable.
PCR Enzyme Blend	Not applicable.
20 mM dNTP Mix (5 mM each dNTP)	Not applicable.
10X Core PCR Buffer	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 2.4%
50 mM Magnesium Chloride	Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1%

GHS label elements

Section 2. Hazard(s) identification

Signal word	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No signal word. No signal word. No signal word. No signal word. No signal word. No signal word.
Hazard statements	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
<u>Precautionary statements</u>			
Prevention	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Response	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Storage	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Supplemental label elements	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	None known. None known. None known. None known. None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	:	Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	Mixture Mixture Mixture Mixture Mixture Mixture
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CAS number/other identifiers

Section 3. Composition and ingredient information

Ingredient name	% (w/w)	CAS number
PCR Enzyme Blend 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 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	: 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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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.
	20 mM dNTP 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.
	10X Core PCR Buffer	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.
	50 mM Magnesium Chloride	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	: 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.
	20X EvaGreen	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	PCR Enzyme Blend	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	20 mM dNTP Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	10X Core PCR Buffer	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.
	50 mM Magnesium Chloride	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Section 4. First aid measures

Skin contact	: Reference Dye	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	20X EvaGreen	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	PCR Enzyme Blend	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	20 mM dNTP Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	10X Core PCR Buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	50 mM Magnesium Chloride	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: 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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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.
	20 mM dNTP 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.
	10X Core PCR Buffer	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.
	50 mM Magnesium Chloride	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

Section 4. First aid measures

Potential acute health effects

Eye contact	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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.
Inhalation	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Inhalation	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Skin contact	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Ingestion	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.

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

Notes to physician	: 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.
	20X EvaGreen	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	PCR Enzyme Blend	Treat symptomatically. Contact poison treatment

Section 4. First aid measures

	20 mM dNTP Mix	specialist immediately if large quantities have been ingested or inhaled.
	10X Core PCR Buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	50 mM Magnesium Chloride	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	: Reference Dye	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	20X EvaGreen	No specific treatment.
	PCR Enzyme Blend	No specific treatment.
	20 mM dNTP Mix	No specific treatment.
	10X Core PCR Buffer	No specific treatment.
	50 mM Magnesium Chloride	No specific treatment.
Protection of first-aiders	: Reference Dye	No action shall be taken involving any personal risk or without suitable training.
	20X EvaGreen	No action shall be taken involving any personal risk or without suitable training.
	PCR Enzyme Blend	No action shall be taken involving any personal risk or without suitable training.
	20 mM dNTP Mix	No action shall be taken involving any personal risk or without suitable training.
	10X Core PCR Buffer	No action shall be taken involving any personal risk or without suitable training.
	50 mM Magnesium Chloride	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	: Reference Dye	Use an extinguishing agent suitable for the surrounding fire.
	20X EvaGreen	Use an extinguishing agent suitable for the surrounding fire.
	PCR Enzyme Blend	Use an extinguishing agent suitable for the surrounding fire.
	20 mM dNTP Mix	Use an extinguishing agent suitable for the surrounding fire.
	10X Core PCR Buffer	Use an extinguishing agent suitable for the surrounding fire.
	50 mM Magnesium Chloride	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Reference Dye	None known.
	20X EvaGreen	None known.
	PCR Enzyme Blend	None known.
	20 mM dNTP Mix	None known.
	10X Core PCR Buffer	None known.
	50 mM Magnesium Chloride	None known.

Section 5. Firefighting measures

Specific hazards arising from the chemical	: Reference Dye	In a fire or if heated, a pressure increase will occur and the container may burst.
	20X EvaGreen	In a fire or if heated, a pressure increase will occur and the container may burst.
	PCR Enzyme Blend	In a fire or if heated, a pressure increase will occur and the container may burst.
	20 mM dNTP Mix	In a fire or if heated, a pressure increase will occur and the container may burst.
	10X Core PCR Buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	50 mM Magnesium Chloride	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	20X EvaGreen	No specific data.
	PCR Enzyme Blend	Decomposition products may include the following materials: carbon dioxide carbon monoxide
	20 mM dNTP Mix	No specific data.
	10X Core PCR Buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
	50 mM Magnesium Chloride	Decomposition products may include the following materials: halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters	: 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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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.
	20 mM dNTP 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.
	10X Core PCR Buffer	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	50 mM Magnesium Chloride	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Firefighting measures

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.
	20X EvaGreen	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	PCR Enzyme Blend	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	20 mM dNTP Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	10X Core PCR Buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	50 mM Magnesium Chloride	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	: 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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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.
	20 mM dNTP 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. Put on appropriate personal protective equipment.
	10X Core PCR Buffer	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
	50 mM Magnesium Chloride	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

Section 6. Accidental release measures

For emergency responders : Reference Dye

20X EvaGreen

PCR Enzyme Blend

20 mM dNTP Mix

10X Core PCR Buffer

50 mM Magnesium Chloride

protective equipment.

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".

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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 : Reference Dye

20X EvaGreen

PCR Enzyme Blend

20 mM dNTP Mix

10X Core PCR Buffer

50 mM Magnesium Chloride

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).

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Methods and material for containment and cleaning up

Section 6. Accidental release measures

Methods for cleaning up	: 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.
	20X EvaGreen	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.
	PCR Enzyme Blend	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.
	20 mM dNTP 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.
	10X Core PCR Buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	50 mM Magnesium Chloride	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	: Reference Dye	Put on appropriate personal protective equipment (see Section 8).
	20X EvaGreen	Put on appropriate personal protective equipment (see Section 8).
	PCR Enzyme Blend	Put on appropriate personal protective equipment (see Section 8).
	20 mM dNTP Mix	Put on appropriate personal protective equipment (see Section 8).
	10X Core PCR Buffer	Put on appropriate personal protective equipment (see Section 8).
	50 mM Magnesium Chloride	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: 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.
	20X EvaGreen	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove

Section 7. Handling and storage

PCR Enzyme Blend

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.

20 mM dNTP Mix (5 mM each dNTP)

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

10X Core PCR Buffer

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

50 mM Magnesium Chloride

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 : 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.

20X EvaGreen

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.

PCR Enzyme Blend

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.

20 mM dNTP Mix

Store in accordance with local regulations. Store in

Section 7. Handling and storage

10X Core PCR Buffer

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.

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.

50 mM Magnesium Chloride

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

Ingredient name	Exposure limits
PCR Enzyme Blend Glycerol	Safe Work Australia (Australia, 1/2014). TWA: 10 mg/m ³ 8 hours.

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 and 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

Appearance

Physical state	: Reference Dye	Liquid.
	20X EvaGreen	Liquid.
	PCR Enzyme Blend	Liquid.
	20 mM dNTP Mix (5 mM each dNTP)	Liquid.
	10X Core PCR Buffer	Liquid.
Colour	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
Odour	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
Odour threshold	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
pH	: Reference Dye	8
	20X EvaGreen	Not available.
	PCR Enzyme Blend	8
	20 mM dNTP Mix (5 mM each dNTP)	7.5
	10X Core PCR Buffer	8
Melting point	: Reference Dye	0°C (32°F)
	20X EvaGreen	0°C (32°F)
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	0°C (32°F)
	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	0°C (32°F)

Section 9. Physical and chemical properties

Boiling point	: Reference Dye	100°C (212°F)
	20X EvaGreen	100°C (212°F)
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	100°C (212°F)
	10X Core PCR Buffer	Not available.
Flash point	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Not available.
Evaporation rate	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
Flammability (solid, gas)	: Reference Dye	Not applicable.
	20X EvaGreen	Not applicable.
	PCR Enzyme Blend	Not applicable.
	20 mM dNTP Mix	Not applicable.
	10X Core PCR Buffer	Not applicable.
Lower and upper explosive (flammable) limits	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Not available.
Vapour pressure	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Not available.
Vapour density	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
Relative density	: Reference Dye	Not available.
	20X EvaGreen	1
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	1
	10X Core PCR Buffer	Not available.
Solubility	: Reference Dye	Easily soluble in the following materials: cold water and hot water.
	20X EvaGreen	Easily soluble in the following materials: cold water and hot water.
	PCR Enzyme Blend	Soluble in the following materials: cold water and hot water.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Easily soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

	50 mM Magnesium Chloride	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
Auto-ignition temperature	50 mM Magnesium Chloride	Not available.
	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix	Not available.
Decomposition temperature	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	Not available.
	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
Viscosity	20 mM dNTP Mix	Not available.
	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	Not available.
	: Reference Dye	Not available.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Not available.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Not available.
	50 mM Magnesium Chloride	Not available.

Section 10. Stability and reactivity

Reactivity	: Reference Dye	No specific test data related to reactivity available for this product or its ingredients.
	20X EvaGreen	No specific test data related to reactivity available for this product or its ingredients.
	PCR Enzyme Blend	No specific test data related to reactivity available for this product or its ingredients.
	20 mM dNTP Mix	No specific test data related to reactivity available for this product or its ingredients.
	10X Core PCR Buffer	No specific test data related to reactivity available for this product or its ingredients.
	50 mM Magnesium Chloride	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Reference Dye	The product is stable.
	20X EvaGreen	The product is stable.
	PCR Enzyme Blend	The product is stable.
	20 mM dNTP Mix	The product is stable.
	10X Core PCR Buffer	The product is stable.
	50 mM Magnesium Chloride	The product is stable.
Possibility of hazardous reactions	: Reference Dye	Under normal conditions of storage and use, hazardous reactions will not occur.
	20X EvaGreen	Under normal conditions of storage and use, hazardous reactions will not occur.
	PCR Enzyme Blend	Under normal conditions of storage and use, hazardous reactions will not occur.
	20 mM dNTP Mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	10X Core PCR Buffer	Under normal conditions of storage and use, hazardous reactions will not occur.
	50 mM Magnesium Chloride	Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	No specific data. No specific data. No specific data. No specific data. No specific data. No specific data.
Incompatible materials	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
Hazardous decomposition products	: Reference Dye 20X EvaGreen PCR Enzyme Blend 20 mM dNTP Mix 10X Core PCR Buffer 50 mM Magnesium Chloride	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

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
PCR Enzyme Blend Glycerol	LD50 Oral	Rat	12600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
PCR Enzyme Blend Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Section 11. Toxicological information

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	Reference Dye	Routes of entry anticipated: Oral, Dermal, Inhalation.
	20X EvaGreen	Not available.
	PCR Enzyme Blend	Routes of entry anticipated: Oral, Dermal, Inhalation.
	20 mM dNTP Mix (5 mM each dNTP)	Not available.
	10X Core PCR Buffer	Routes of entry anticipated: Oral, Dermal, Inhalation.
	50 mM Magnesium Chloride	Not available.

Potential acute health effects

Eye contact	Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
	20 mM dNTP Mix	No known significant effects or critical hazards.
	10X Core PCR Buffer	No known significant effects or critical hazards.
Inhalation	50 mM Magnesium Chloride	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
	20 mM dNTP Mix	No known significant effects or critical hazards.
Skin contact	10X Core PCR Buffer	No known significant effects or critical hazards.
	50 mM Magnesium Chloride	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
Ingestion	20 mM dNTP Mix	No known significant effects or critical hazards.
	10X Core PCR Buffer	No known significant effects or critical hazards.
	50 mM Magnesium Chloride	No known significant effects or critical hazards.
	Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	Reference Dye	No specific data.
	20X EvaGreen	No specific data.
	PCR Enzyme Blend	No specific data.
	20 mM dNTP Mix	No specific data.
	10X Core PCR Buffer	No specific data.
	50 mM Magnesium Chloride	No specific data.

Section 11. Toxicological information

Inhalation	: Reference Dye	No specific data.
	20X EvaGreen	No specific data.
	PCR Enzyme Blend	No specific data.
	20 mM dNTP Mix	No specific data.
	10X Core PCR Buffer	No specific data.
	50 mM Magnesium Chloride	No specific data.
Skin contact	: Reference Dye	No specific data.
	20X EvaGreen	No specific data.
	PCR Enzyme Blend	No specific data.
	20 mM dNTP Mix	No specific data.
	10X Core PCR Buffer	No specific data.
	50 mM Magnesium Chloride	No specific data.
Ingestion	: Reference Dye	No specific data.
	20X EvaGreen	No specific data.
	PCR Enzyme Blend	No specific data.
	20 mM dNTP Mix	No specific data.
	10X Core PCR Buffer	No specific data.
	50 mM Magnesium Chloride	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.

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	: Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
	20 mM dNTP Mix	No known significant effects or critical hazards.
	10X Core PCR Buffer	No known significant effects or critical hazards.
	50 mM Magnesium Chloride	No known significant effects or critical hazards.
Carcinogenicity	: Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
	20 mM dNTP Mix	No known significant effects or critical hazards.
	10X Core PCR Buffer	No known significant effects or critical hazards.
	50 mM Magnesium Chloride	No known significant effects or critical hazards.
Mutagenicity	: Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
	20 mM dNTP Mix	No known significant effects or critical hazards.
	10X Core PCR Buffer	No known significant effects or critical hazards.
	50 mM Magnesium Chloride	No known significant effects or critical hazards.
Teratogenicity	: Reference Dye	No known significant effects or critical hazards.
	20X EvaGreen	No known significant effects or critical hazards.
	PCR Enzyme Blend	No known significant effects or critical hazards.
	20 mM dNTP Mix	No known significant effects or critical hazards.
	10X Core PCR Buffer	No known significant effects or critical hazards.
	50 mM Magnesium Chloride	No known significant effects or critical hazards.

Section 11. Toxicological information

Developmental effects	:	Reference Dye	No known significant effects or critical hazards.
		20X EvaGreen	No known significant effects or critical hazards.
		PCR Enzyme Blend	No known significant effects or critical hazards.
		20 mM dNTP Mix	No known significant effects or critical hazards.
		10X Core PCR Buffer	No known significant effects or critical hazards.
Fertility effects	:	Reference Dye	No known significant effects or critical hazards.
		20X EvaGreen	No known significant effects or critical hazards.
		PCR Enzyme Blend	No known significant effects or critical hazards.
		20 mM dNTP Mix	No known significant effects or critical hazards.
		10X Core PCR Buffer	No known significant effects or critical hazards.
		50 mM Magnesium Chloride	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
PCR Enzyme Blend Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
PCR Enzyme Blend 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. 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

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : All components are listed or exempted.

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 Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Canada	: Not determined.
China	: <input checked="" type="checkbox"/> All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: All components are listed or exempted.
Malaysia	: <input checked="" type="checkbox"/> Not determined.
New Zealand	: <input checked="" type="checkbox"/> Not determined.
Philippines	: <input checked="" type="checkbox"/> Not determined.
Republic of Korea	: <input checked="" type="checkbox"/> Not determined.
Taiwan	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 30/03/2016

Date of previous issue : 25/06/2014.

Version : 3

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
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 NOHSC = National Occupational Health and Safety Commission
 SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
Not classified.	

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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