

SAFETY DATA SHEET

miRNA QPCR Master Mix, Part Number 600583

Section 1. Identification

Product identifier : miRNA QPCR Master Mix, Part Number 600583
Part no. (chemical kit) : 600583
Part no. : miRNA QPCR Master Mix 600583-51
 Reference Dye 600530-53

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

Identified uses : Analytical reagent.
 miRNA QPCR Master Mix 2 X 2.5 ml
 Reference Dye 0.1 ml (100 µl 1 mM)

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

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

Section 2. Hazard identification

Classification of the substance or mixture

Not classified.

GHS label elements

Signal word	: miRNA QPCR Master Mix Reference Dye	No signal word. No signal word.
Hazard statements	: miRNA QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
<u>Precautionary statements</u>		
Prevention	: miRNA QPCR Master Mix Reference Dye	Not applicable. Not applicable.
Response	: miRNA QPCR Master Mix Reference Dye	Not applicable. Not applicable.
Storage	: miRNA QPCR Master Mix Reference Dye	Not applicable. Not applicable.
Disposal	: miRNA QPCR Master Mix Reference Dye	Not applicable. Not applicable.
Supplemental label elements	: miRNA QPCR Master Mix Reference Dye	None known. None known.
Other hazards which do not result in classification	: miRNA QPCR Master Mix Reference Dye	None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture : miRNA QPCR Master Mix Mixture
Reference Dye Mixture

Ingredient name	Synonyms	% (w/w)	CAS number
miRNA QPCR Master Mix			
Glycerol	Glycerol	≥1 - ≤5	56-81-5
Reference Dye			
Potassium chloride	Potassium Chloride	≥1 - ≤5	7447-40-7

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

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

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

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	: miRNA QPCR Master Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	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.
Inhalation	: miRNA QPCR Master Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	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.
Skin contact	: miRNA QPCR Master Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Reference Dye	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: miRNA QPCR Master Mix	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Reference Dye	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Section 4. First-aid measures

Potential acute health effects

Eye contact	: miRNA QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
Inhalation	: miRNA QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: miRNA QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	: miRNA QPCR Master Mix Reference Dye	No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: miRNA QPCR Master Mix Reference Dye	No specific data. No specific data.
Inhalation	: miRNA QPCR Master Mix Reference Dye	No specific data. No specific data.
Skin contact	: miRNA QPCR Master Mix Reference Dye	No specific data. No specific data.
Ingestion	: miRNA QPCR Master Mix Reference Dye	No specific data. No specific data.

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

Notes to physician	: miRNA 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	: miRNA QPCR Master Mix Reference Dye	No specific treatment. No specific treatment.
Protection of first-aiders	: miRNA QPCR Master Mix Reference Dye	No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: miRNA 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	: miRNA QPCR Master Mix Reference Dye	None known. None known.
Specific hazards arising from the chemical	: miRNA 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.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: miRNA QPCR Master Mix Reference Dye	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Special protective actions for fire-fighters	: miRNA 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. 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	: miRNA 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. 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	: miRNA 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 spilled 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 spilled material. Put on appropriate personal protective equipment.
For emergency responders	: miRNA QPCR Master Mix Reference Dye	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions	: miRNA QPCR Master Mix	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Reference Dye	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures	: miRNA QPCR Master Mix	Put on appropriate personal protective equipment (see Section 8).
	Reference Dye	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: miRNA QPCR Master Mix	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
	Reference Dye	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Section 7. Handling and storage

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

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
miRNA QPCR Master Mix Glycerol	CA Alberta Provincial (Canada, 6/2018). OEL: 10 mg/m ³ 8 hours. Form: Mist CA Quebec Provincial (Canada, 6/2022). TWAEV: 10 mg/m ³ 8 hours. Form: mist CA Saskatchewan Provincial (Canada, 7/2013). STEL: 20 mg/m ³ 15 minutes. Form: mist TWA: 10 mg/m ³ 8 hours. Form: mist CA British Columbia Provincial (Canada, 6/2023). TWA: 3 mg/m ³ 8 hours. Form: respirable mist TWA: 10 mg/m ³ 8 hours. Form: total mist

Biological exposure indices

No exposure indices known.

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

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

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

Section 9. Physical and chemical properties and safety characteristics

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

Appearance

- Physical state** : miRNA QPCR Master Mix Liquid.
Reference Dye Liquid.
- Color** : miRNA QPCR Master Mix Not available.
Reference Dye Not available.
- Odor** : miRNA QPCR Master Mix Not available.
Reference Dye Not available.
- Odor threshold** : miRNA QPCR Master Mix Not available.
Reference Dye Not available.
- pH** : miRNA QPCR Master Mix 8
Reference Dye 8
- Melting point/freezing point** : miRNA QPCR Master Mix 0°C (32°F)
Reference Dye Not available.
- Boiling point, initial boiling point, and boiling range** : miRNA QPCR Master Mix 100°C (212°F)
Reference Dye Not available.

Flash point

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
miRNA QPCR Master Mix						
Glycerol	-	-	-	177	350.6	-

- Evaporation rate** : miRNA QPCR Master Mix Not available.
Reference Dye Not available.
- Flammability** : miRNA QPCR Master Mix Not applicable.
Reference Dye Not applicable.
- Lower and upper explosion limit/flammability limit** : miRNA QPCR Master Mix Not available.
Reference Dye Not available.
- Vapor pressure** :

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
miRNA QPCR Master Mix						
water	17.5	2.3	-	92.258	12.3	-
Glycerol	0.000075	0.00001	-	0.0025	0.00033	-
Reference Dye						
water	17.5	2.3	-	92.258	12.3	-

Relative vapor density : miRNA QPCR Master Mix Not available.
Reference Dye Not available.

Relative density : miRNA QPCR Master Mix Not available.
Reference Dye Not available.

Solubility(ies) :

Media	Result
miRNA QPCR Master Mix	
water	Soluble
Reference Dye	
water	Soluble

Partition coefficient: n-octanol/water : miRNA QPCR Master Mix Not applicable.
Reference Dye Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
miRNA QPCR Master Mix			
Glycerol	370	698	-

Decomposition temperature : miRNA QPCR Master Mix Not available.
Reference Dye Not available.

Viscosity : miRNA QPCR Master Mix Not available.
Reference Dye Not available.

Particle characteristics

Median particle size : miRNA QPCR Master Mix Not applicable.
Reference Dye Not applicable.

Section 10. Stability and reactivity

Reactivity : miRNA QPCR Master Mix No specific test data related to reactivity available for this product or its ingredients.
Reference Dye No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : miRNA QPCR Master Mix The product is stable.
Reference Dye The product is stable.

Possibility of hazardous reactions : miRNA QPCR Master Mix Under normal conditions of storage and use, hazardous reactions will not occur.
Reference Dye Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid	: miRNA QPCR Master Mix Reference Dye	No specific data. No specific data.
Incompatible materials	: miRNA QPCR Master Mix Reference Dye	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials.
Hazardous decomposition products	: miRNA QPCR Master Mix Reference Dye	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
miRNA QPCR Master Mix Glycerol	LD50 Oral	Rat	12600 mg/kg	-
Reference Dye Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
miRNA QPCR Master Mix Glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Reference Dye Potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : miRNA QPCR Master Mix Not available.
Reference Dye Not available.

Potential acute health effects

Eye contact : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Inhalation : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Skin contact : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Ingestion : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : miRNA QPCR Master Mix No specific data.
Reference Dye No specific data.

Inhalation : miRNA QPCR Master Mix No specific data.
Reference Dye No specific data.

Skin contact : miRNA QPCR Master Mix No specific data.
Reference Dye No specific data.

Ingestion : miRNA QPCR Master Mix No specific data.
Reference Dye No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Carcinogenicity : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Mutagenicity : miRNA QPCR Master Mix No known significant effects or critical hazards.
Reference Dye No known significant effects or critical hazards.

Reproductive toxicity : miRNA 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

Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
miRNA QPCR Master Mix Glycerol	12600	N/A	N/A	N/A	N/A
Reference Dye Reference Dye Potassium chloride	70270.3 2600	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
miRNA QPCR Master Mix Glycerol	Acute LC50 54000 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
Reference Dye Potassium chloride	Acute EC50 9.24 g/L Fresh water	Algae - <i>Desmodesmus subspicatus</i>	72 hours
	Acute EC50 1337000 µg/l Fresh water	Algae - <i>Navicula seminulum</i>	96 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans - <i>Pseudosida ramosa</i> - Neonate	48 hours
	Acute LC50 93000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 509.65 mg/l Fresh water	Fish - <i>Danio rerio</i>	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
miRNA QPCR Master Mix Glycerol	301D Ready Biodegradability - Closed Bottle Test	93 % - 30 days	-	-

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

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
miRNA QPCR Master Mix Glycerol	-1.76	-	Low
Reference Dye Potassium chloride	-0.46	-	Low

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

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

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

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada : Not determined.

United States : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 02/16/2024

Date of previous issue : 03/22/2021

Version : 7

Key to abbreviations

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

Procedure used to derive the classification

Classification	Justification
Not classified.	

✔ Indicates information that has changed from previously issued version.

Notice to reader

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