



## Safety Data Sheet

### 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name	<b>RT-PCR Quick Master Mix</b>
Product Code	PCR-311
SUPPLIER	
Name	TOYOBO Co., Ltd.
Address	2-8 Dojima Hama 2-chome, Kita-Ku OSAKA 530-8230 JAPAN
Department	Life Science Department
Emergency Telephone No.	+81-6-6348-3786
Fax No.	+81-6-6348-3833
Recommended use and restrictions on use	Master mix for RT-PCR (Reagents for research)

### 2 HAZARDS IDENTIFICATION

Most Important Hazards 2x RT-PCR Quick Master Mix contain glycerol and may cause eye and skin irritation.

Specific Hazard Not available

GHS Classification

Hazard class and category

Physical Hazards	Flammable liquids	2xRT-PCR Quick Master Mix Not classified	Manganese(II) acetate Not classified
Health Hazards	Skin corrosion /Irritation	Category 3	Classification not possible
	Serious eye damage /Eye irritation	Category 2B	Classification not possible
Environmental Hazards		Classification not possible	Classification not possible
Physical Hazards	Flammable liquids	PositiveControl Not classified	Control Primer F Not classified
Health Hazards	Skin corrosion /Irritation	Classification not possible	Classification not possible
	Serious eye damage /Eye irritation	Classification not possible	Classification not possible
Environmental Hazards		Classification not possible	Classification not possible

Physical Hazards	Flammable liquids	Control Primer R Not classified
Health Hazards	Skin corrosion /Irritation	Classification not possible
	Serious eye damage /Eye irritation	Classification not possible
Environmental Hazards		Classification not possible

Label elements 2xRT-PCR Quick Master Mix

Pictogram or symbol -

Signal word Warning

Hazard statement Causes mild skin irritation  
Causes eye irritation

Precautionary statement

Prevention Wash hands thoroughly after handling

Response

If skin irritation occurs: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.



RT-PCR Quick Master Mix  
First issue : May. 26, 2015

SDS No.

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### 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product	Mixture	
Chemical Nature	Aqueous solution	
Parts Name	Main Component	CAS No.
<2x RT-PCR Quick Master Mix>	N,N-Bis(2-hydroxyethyl)glycine	150-25-4
	Potassium acetate	127-08-2
	2'-Deoxyadenosine 5'-triphosphate	1927-31-7
	2'-Deoxycytidine 5'-triphosphate	102783-51-7
	2'-Deoxyguanosine 5'-triphosphate	93919-41-6
	Thymidine 5' -triphosphate	18423-43-3
	Bovine Serum Albumin	-
	Immunoglobulin	-
	DNA polymerase	-
	Glycerol	56-81-5
	Polyethylene glycol tert-octylphenyl ether	9002-93-1
<50mM Mn(OAc) <sub>2</sub> >	Manganese(II) acetate	638-38-1
<Positive Control RNA>	RNA	-
<Control Primer F>	DNA	-
<Control Primer R>	DNA	-

#### Components Contributing to the Hazard

Common Chemical Name (or Generic Name)	Glycerol	Manganese(II) acetate	Polyethylene glycol tert-octylphenyl ether
Synonyms	Glycerin		Triton X-100
Chemical formula	CH <sub>2</sub> OHCHOHCH <sub>2</sub> OH	(CH <sub>3</sub> COO) <sub>2</sub> Mn	C <sub>8</sub> H <sub>17</sub> -C <sub>6</sub> H <sub>4</sub> O- (C <sub>2</sub> H <sub>4</sub> O) <sub>n</sub> H
CAS No.	56-81-5	638-38-0	9002-93-1
Concentration	<20%	0.9%(As for Mn<0.3%)	<0.02%

### 4 FIRST-AID MEASURES

Inhalation	In case of irritation by inhaling this product, move affected person to
Skin Contact	Wash with plenty of clean water, immediately.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Try to get the affected person to vomit as much as possible. Seek medical attention, immediately.

### 5 FIRE-FIGHTING MEASURES

Extinguishing Media	Water, Carbon Dioxide, Foam, Dry Chemical Powder
Protection of fire-fighters	Fire-fighting should be done from the windward side of fire area. Fire-fighters should wear proper protective equipment in case of large scale fire.

### 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear protective equipments and avoid eye/skin contact and inhalation.
Environmental Precautions	Avoid disposition to the environment.
Methods for Cleaning up	Use cloth, paper, or anything similar to soak up to the solution leaking out of the container. Take up under vacuum using dust collecting filter.



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### 7 HANDLING AND STORAGE

#### HANDLING

Technical Measures	Wear protective equipments and avoid contact with eyes and skin. Handle with ventilation and local exhaust system.
Precautions	Avoid substance contact. After handling, wash hands completely.
Safe Handling Advice	Keep the handling area always clean.

#### STORAGE

Proper Storage Conditions	Keep tightly closed and store at below -20°C
Packaging Materials	Store in the original package

### 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

#### ENGINEERING

Set up good ventilation and exhaust system in the work area.

#### Control Parameter

Limit Values	Glycerol (mist)	Manganese(II) acetate tetrahydrate	Polyethylene glycol tert-octylphenyl ether
JSOH OEL	not established	0.3mg/m <sup>3</sup>	not established
ACGIH TLV	10mg/m <sup>3</sup>	0.2mg/m <sup>3</sup>	not established
OSHA PEL	total dust: 15mg/m <sup>3</sup> TWA respirable fr.: 5mg/m <sup>3</sup> TWA	not established	not established

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection	Wear a dust mask when needed.
Hand Protection	Wear chemical safety gloves.
Eye Protection	Wear protective eyeglasses or chemical safety goggles.
Skin and Body Protection	Wear lab coat when needed.

### 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid. Lysis Solution, Stop Solution, and Nuclease-free Water freeze at -20°C.
Colour	Colourless
Odour	None
pH	6.0-9.0
Flash Point	No flammability due to aqueous solution
Explosion limit	Not explosible
Density	1.0~1.2(g/cm <sup>3</sup> )
Solubility	Soluble in water

### 10 STABILITY AND REACTIVITY

Stability	Stable at below -20°C.
Possible Hazardous Conditions to Avoid	Nothing particular
Material to Avoid	High temperature, ignition sources, direct sunlight
Hazardous Decomposition	Strong oxidizer, strong reducers
	Not available



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### 11 TOXICOLOGICAL INFORMATION

Acute Toxicity	Not Available		
Local Effects	May cause eye and skin irritation.		
Toxicological information on the component of this product			
	Glycerol	Manganese(II) acetate tetrahydrate	Polyethylene glycol tert-octylphenyl ether
Acute toxicity (LD50)	Oral-mouse: 4090mg/kg Oral-rat: 12.6g/kg	Oral-rat: 3730mg/kg	Oral-rat: 1800mg/kg
Skin corrosion/Irritation	rabbit:500mg/24hr:Mild	-	-
Serious eye damage/Eye irritation	rabbit:500mg/24hr:Mild	-	rabbit: Moderate irritation (Result of Hazard Assessment Report 2001- 42(2002) conducted by Chemical Evaluation and Research Institute in Japan)

### 12 ECOLOGICAL INFORMATION

Ecotoxicological information on the components of this product	
	Poly(oxyethylene) octylphenyl ether
Persistence/Degradability	Not available
Bioaccumulation	Not available
Mobility	Soluble in water and diffusible into water environment.
Acute aquatic toxicity (LC50)	Algae (Selenastrum)-0.21mg/l-96h (Result of Hazard Assessment Report conducted by Ministry of the Environment and Chemical Evaluation and Research Institute in Japan-2006)

### 13 DISPOSAL CONSIDERATIONS

Waste from Residues	Dispose of in accordance with all applicable local and national laws and regulations.
Contaminated Packaging	Dispose of in accordance with all applicable local and national laws and regulations.

### 14 TRANSPORT INFORMATION

International Regulations	
UN Classification Number	Not classified
	Follow all of the laws and regulations in your respective country.
Specific Precautions	To prevent packages from breaking, handle with care.

### 15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

### 16 OTHER INFORMATION

Notice	The information in this SDS, to the best of our knowledge, is accurate and correct. However, TOYOBO makes no warranty and assumes no liability whatsoever in connection with any use of this information. The SDS is subject to revision as new information becomes available.
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