



## Material Safety Data Sheet

### 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name	ReverTra Ace <sup>TM</sup> qPCR RT Master Mix with gDNA Remover
Product Code	FSQ-301, 301S
SUPPLIER	
Name	TOYOBO Co., Ltd.
Address	2-2-8 Dojima Hama Kita-ku Osaka, 530-8230 Japan
Department	Biotech support Department
Emergency Telephone No.	+81-6-6348-3786
Fax No.	+81-6-6348-3833
Recommended use and restrictions on use	cDNA Synthesis Kit for Real-Time PCR (Reagent for research)

### 2 HAZARDS IDENTIFICATION

Most Important Hazards	Few adverse human health effects are anticipated.
Specific Hazards	Not available
GHS Classification	Classification not possible



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### 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product (Substance/Mixture)	Mixture	
Chemical Nature	Aqueous solution of enzyme, substrate, etc.	
Parts Name	Main components	CAS No. (EC NO.)
gDNA Remover	Glycerol	56-81-5
	Deoxyribonuclease I	-
4×DN Master Mix	Tris(Hydroxymethyl)aminomethane	7786-30-3
	Magnesium chloride	7786-30-3
	Glycerol	56-81-5
	Ribonuclease Inhibitor	-
5×RT Master Mix II	Tris(Hydroxymethyl)aminomethane	77-86-1
	Potassium chloride	7447-40-7
	Deoxyadenosine triphosphate	1927-31-7
	Deoxycytidine triphosphate	102783-51-7
	Deoxyguanosine triphosphate	93919-41-6
	Deoxythymidine triphosphate	18423-43-3
	Poly(oxyethylene) Nonylphenylether	9016-45-9
	Glycerol	56-81-5
	Reverse transcriptase	9068-38-6
	Deoxyribonucleic acid	-
5×RT Master Mix II no-RT Control	(the same as 5×RT Master Mix II but no Reverse transcriptase contained)	
Nuclease-free Water	Water	-
Components Contributing to the Hazard		
Common Chemical Name (or Generic Name)	Glycerol	Poly(oxyethylene) Nonylphenylether
Synonyms	Glycerin	Nonidet P-40
Contained	gDNA Remover : 50%	5×RT Master Mix II, 5×RT
Parts:Percentage	4×DN Master Mix, 5×RT Master Mix II, 5×RT Master Mix II no-RT Control : 40%	Master Mix II no-RT Control : 0.0025%
Chemical formula	CH <sub>2</sub> OHCHOHCH <sub>2</sub> OH	Not available
CAS No.	56-81-5	9016-45-9

### 4 FIRST-AID MEASURES

Inhalation	In case of irritation by inhaling this product, move affected person to fresh air and await recovery. If irritation persists, seek immediate medical attention.
Skin Contact	Wash with clean water, immediately.
Eye Contact	Flush eyes with clean water for more than 15 minutes, and seek medical attention.
Ingestion	Induce vomiting. If indisposition continues, seek medical attention.



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### 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 gear to 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 the solution leaking out of the container. Take up under vacuum using dust collecting filter.

### 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 with clean water.
Safe Handling Advice	Good laboratory technique should be used when handling this product.

#### STORAGE

Technical Measures	Store in the laboratory bottle
Storage Conditions	Store at about -20°C
Incompatible Products	Oxidizers
Packaging Materials	Store in the original package

### 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

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

#### Control Parameter

Limit Values		Glycerol	Poly(oxyethylene) Nonylphenylether
JSOH	OEL	Not established	Not established
ACGIH	TLV	10mg/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

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection	Wear a dust mask.
Hand Protection	Chemical safety gloves.
Eye Protection	Chemical safety goggles.
Skin and Body Protection	Long sleeves to prevent contact with skin.



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### 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	gDNA Remover, 4×DN Master Mix, 5×RT Master Mix II, 5×RT Master Mix II no-RT Control: Liquid at -20°C.
Colour	None
Odour	None
pH	7.0-9.0
Flash Point	No flammability due to aqueous solution, but glycerol whose flash point 160°C may stay behind after volatilization gDNA Remover, 4×DN Master Mix, 5×RT Master Mix II, 5×RT Master Mix II no-RT Control.
Boiling Point	Not available
Melting Point	Not available
Decomposition Temperature	Not available
Density	1.0-1.2
Solubility	Soluble in water

### 10 STABILITY AND REACTIVITY

Stability	Might be degraded but not cause hazardous reaction at room temperature.
Possible Hazardous Reactions	None
Conditions to Avoid	High temperature, ignition sources, direct sunlight
Material to Avoid	Strong oxidizers, strong reducers
Hazardous Decomposition Product	Not available

### 11 TOXICOLOGICAL INFORMATION

Acute Toxicity	Not available
Local Effects	May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

### 12 ECOLOGICAL INFORMATION

Mobility	Soluble in water and diffusible into water environment.
Persistence/Degradability	Not available
Bioaccumulation	Not available

### 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
Specific Precautions	Follow all of the laws and regulations in your respective country. To prevent packages from breaking, handle with care.



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### 15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

### 16 OTHER INFORMATION

#### Notice

This product is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The information in this MSDS, 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 information shall not be taken as being all inclusive and is to be used only a guide. All materials and mixtures may be present unknown hazards and should be used with caution. The MSDS is subject to revision as new information becomes available.