



MagExtractor™ -RNA-
 First issue: June. 1, 2017
 Revised issue:
 SDS No. 1415F

Safety Data Sheet

1 Chemical product and company identification

Identification of the product	MagExtractor™ -RNA-
Product Code	NPK-201F, NPK-292F
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 uses and restrictions on use	Isolation of RNA (for research use only)

2 Hazards identification

Important hazards	
Physical and chemical hazards	
Adverse effects on human health	Guanidinium hydrochloride is contained in Lysis&Binding Solution and Washing Solution. May cause eye and skin irritation.
Adverse effects on the environment	May develop poisonous gas in contact with oxidant.

GHS classification

Hazard class and category	<Magnetic beads>	<Lysis&Binding Solution>	<Washing Solution I>
Physical Hazards	Classification not possible	Classification not possible	Classification not possible
Health Hazards			
Acute toxicity: Oral	Not classified	Category 4	Category 4
Skin corrosion/Irritation	Category 2	Category 2	Category 2
Serious eye damage/Eye irritation	Category 2A	Category 2A	Category 2A
Carcinogenicity	Classification not possible	Classification not possible	Classification not possible
Toxic to reproduction	Category 2	Category 2	Classification not possible
Specific target organ toxicity (single exposure)	Category 2(nervous system) Category 3 (respiratory irritation) Category 1 (respiratory organs)	Category 2(nervous system)	Classification not possible
Specific target organ toxicity (repeated exposure)	Category 2(nervous system, kidney)	Category 2(nervous system, kidney)	Classification not possible
Environmental Hazards	Classification not possible	Classification not possible	Classification not possible
Acute hazards to the aquatic environment	Classification not possible	Classification not possible	Category 3
Long-term hazards to the aquatic environment	Classification not possible	Classification not possible	Category 3



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2 Hazards identification(Continued)

Label elements

<Magnetic beads>

Pictograms or symbols



Signal word

Danger

Hazard statements

Causes skin irritation

Causes serious eye irritation

Suspected of damaging fertility or the unborn child

May cause respiratory irritation

Cause damage to respiratory organs through prolonged or repeated exposure

May cause damage to nervous system

May cause damage to nervous system and kidney through prolonged or repeated exposure

Precautionary statements

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection / face protection.

Use only outdoors or in a well-ventilated area.

Do not breathe dust / fume / gas / mist / vapours / spray.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Response

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor if you feel unwell.

IF ON SKIN: Wash with plenty of water and soap.

Take off contaminated clothing and wash it before reuse.

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.

IF exposed or concerned: Get medical advice/attention.

Get medical advice/attentions if you feel unwell.

Storage

Store locked up.

Disposal

Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents / container in accordance with local / regional / national /international regulation.



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2 Hazards identification(Continued)

<Lysis&Binding Solution>

Pictograms or symbols



Signal word

Hazard statements

Warning

Harmful if swallowed

Cause skin irritation

Causes serious eye irritation

Suspected of damaging fertility or the unborn child

May cause damage to nervous system

May cause damage to nervous system and kidney through prolonged or repeated exposure

Precautionary statements

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wash hands thoroughly after handling

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

Do not breathe dust/fume/gas/mist/vapours /spray.

Response

IF ON SKIN: Wash with plenty of water and soap.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

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.

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

Rinse mouth.

Storage

Store locked up.

Disposal

Dispose of contents / container in accordance with local / regional / national /international regulation.

<Washing Solution>

Pictograms or symbols



Signal word

Hazard statements

Warning

Harmful if swallowed

Cause skin irritation

Causes serious eye irritation

Harmful to aquatic life with long lasting effects



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2 Hazards identification(Continued)

Precautionary statements	
Prevention	Wash hands thoroughly after handling Do not eat, drink or smoke when using this product. Wear protective gloves/eye protection/face protection. Avoid release to the environment.
Response	IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. 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. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
Disposal	Dispose of contents / container in accordance with local / regional / national /international regulation.

3 Composition/information on ingredients

Chemical product (a substance or a mixture) Mixture
 <Lysis & Binding Solution>, <Washing Solution>; aqueous solution
 <Magnetic Beads>; aqueous dispersion

Chemical Nature

Parts Name	Main components	CAS No. (EC No.)
<Magnetic Beads>	Magnetic Beads (Silicon dioxide, triiron tetraoxide)	-
	Lithium Chloride	7447-41-8
<Lysis & Binding Solution>	Guanidine Hydrochloride	50-01-1
	di-Sodium Dihydrogen Ethylenediaminetetraacetate Dihydrate	6381-92-6
	Poly(oxyethylene) octylphenyl ether	9002-93-1
<Washing Solution>	Guanidine Hydrochloride	50-01-1
	Poly(oxyethylene) octylphenyl ether	9002-93-1

Components Contributing to the Hazard

Common Chemical Name (or Generic Name)	Silicon dioxide	triiron tetraoxide	Guanidine Hydrochloride
Synonyms	colloidal silica	iron(II) iron(III) oxide	Guanidinium Hydrochloride
Contained Parts:Percentage	Magnetic Beads: 15~30%	Magnetic Beads: 5~15%	Lysis&Binding Solution Washing Solution: 45~65%
CAS No.	7631-86-9	1317-61-9	50-01-1
Common Chemical Name (or Generic Name)	Lithium Chloride	Poly(oxyethylene) octylphenyl ether	
Synonyms	Lithium Chloride	TritonX-100	
Contained Parts:Percentage	Magnetic Beads: 20%	Lysis&Binding Solution Washing Solution I: <1%	
CAS No.	7447-41-8	9002-93-1	



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4 First-aid measures

Inhalation	In case of irritation by inhaling this product, move affected person to fresh air. Call a POISON CENTER or doctor if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of clean water, immediately. If skin irritation occurs: Get medical advice/attention.
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	Rinse mouth. Call a POISON CENTER or doctor/physician if you fell unwell. Do not induce to vomiting.
Most important symptoms/effects	Inhalation, Ingestion: Cough, Diarrhea Skin, Eye: Pain, Redness

5 Fire-fighting measures

Extinguishing media	Powder, Carbon Dioxide, Foam, Dry sand
Precautions for 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 equipment and avoid contact with eyes and skin.
Precautions	Wear protective equipment and avoid contact with eyes and skin. Handle the reagent not to generate aerosol or dust.
Hygiene measures	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Storage	
Technical measures	Keep tightly closed and store at about 2-8°C.
Packaging Materials	Store in the original package

8 Exposure controls and personal protection

Engineering controls	Set up good ventilation and exhaust system in the work area. Provide shower and vanity unit nearby.
Personal protective equipment	
Respiratory protection	Wear a dust mask.
Hand protection	Chemical safety gloves.
Eye protection	Chemical safety goggles.
Skin and body protection	Wear lab coat when needed.

9 Physical and chemical properties

Physical State	Liquid
Colour	Brown suspension(Magnetic Beads), Clear solution(Others)
pH	7.0~8.0
Flash point	No flammability due to aqueous solution
Explosion limit	Not explosive
Density	Not available
Solubility	Soluble in water except for Magnetic Beads .



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10 Stability and reactivity

Chemical stability and hazardous reactions	Stable under normal handling.
Conditions to Avoid	
Incompatible materials	Strong oxidizers
Hazardous decomposition products	carbon monoxide, nitrogen oxides, chlorine, hydrogen chloride

11 Toxicological information

Acute toxicity	May be harmful if swallowed
Skin irritation/corrosion	May cause eye and skin irritation.
Specific target organ toxicity-single exposure	May cause respiratory irritation.
Toxicological information on the component of this product	

	Silicon dioxide	triiron tetraoxide	Guanidine Hydrochloride
Acute toxicity	not available	not classified	Category 4 Oral-rat: LD50 774mg/kg Dermal-rabbit: LD50 >2000mg/kg Inhalation-rat: LC50 5.319mg/L(dust)
Skin corrosion/Irritation	not available	not classified	Category 2
Eye damage/irritation	not available	Category 2	Category 2A
Carcinogenicity	IARC Group 3	not available	not available
Specific target organ toxicity-single exposure	Not available	Category 3 (respiratory tract irritation)	not available
Specific target organ toxicity-repeated exposure	Not available	Category 1 (respiratory organs)	not available
Acute toxicity	Triton X-100	Lithium Chloride	
	Oral-rat: LD50 1800mg/kg Dermal-rabbit: LD50 >3000mg/kg	Category 4 Oral-rat: LD50 526mg/kg Dermal-rabbit: LD50 >2000mg/kg Inhalation-rat: LC50 5.57mg/L(dust)	
Skin corrosion/Irritation	Not available	Category 2	
Eye damage/irritation	Category 2A	Category 2A	
Carcinogenicity	Not available	not available	
Specific target organ toxicity-single exposure	Not available	Category 2 (Central Nervous System)	
Specific target organ toxicity-repeated exposure	Not available	Category 2 (Central Nervous System,renal)	



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12 Ecological information

Ecotoxicity	Not available
Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	Soluble in water and diffusible into water environment except for Magnetic Beads.

13 Disposal considerations

Waste from residues	Dispose of in accordance with all applicable local and national laws and regulations.
Contaminated container and Contaminated packaging	Dispose of in accordance with all applicable local and national laws and regulations.

14 Transport information

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

15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.
Substances of very high concern (SVHC) according to REACH.
9002-93-1 Triton X-100

16 OTHER INFORMATION

Notice	This product is sold for research purposes only . 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 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 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 SDS is subject to revision as new information becomes available.
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