

TOYOBO

Safety Data Sheet

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product	GenNext™ Transposase-based DNA Library Prep Kit
Product Code	TNP-101, TNP-101L, TNP-101T
SUPPLIER	
Name	TOYOBO Co., Ltd.
Address	Osaka Umeda Twin Towers South, 1-13-1 Umeda, Kita-ku, Osaka 530-0001, Japan
Department	Biotechnology Overseas Sales and Marketing Department
Emergency Telephone No.	+81-6-6348-3846
Fax No.	+81-6-6348-3833
Recommended use and restrictions on use	Library construction for next-generation sequencing (Reagents for research)

2 HAZARDS IDENTIFICATION

<Tagmentation Buffer>

GHS Classification

Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Mutagenicity:	Category 2
Carcinogenicity:	Category 1B
Reproductive toxicity:	Category 1B
Specific target organ systemic toxicity following single exposure	Category 1 (liver) Category 2 (the respiratory system)
Specific target organ systemic toxicity following repeated exposure	Category 1 (liver)
Acute hazards to the aquatic environment	No Classification
Chronic hazards to the aquatic environment	No Classification

Label elements

Pictogram or symbol



Signal word

Danger

Hazard statements:

Causes skin irritation
 Causes serious eye irritation
 Suspected of causing genetic defects
 May cause cancer
 May damage fertility or the unborn child
 Causes damage to the following organs: liver
 May cause damage to the following organs: the respiratory system
 Causes damage to the following organs through prolonged or repeated exposure: liver

Precautionary statements:

【Prevention】 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Wash hands thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection.

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- 【Response】** IF ON SKIN:Wash with plenty of water.
IF IN EYES:Rinse cautiously with water for several minutes.Remove contact lenses if present and easy to do.
Continue rinsing.
Get medical advice/attention if you feel unwell.
If exposed or concerned: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Specific treatment (see instructions on this label).
Wash contaminated clothing before reuse.
- 【Storage】** Store locked up.
- 【Disposal】** Dispose of in accordance with all applicable local and national laws and regulations.

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GHS Classification

Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification
Skin corrosion/irritation	No Classification
Serious eye damage/eye irritation	No Classification
Acute hazards to the aquatic environment	No Classification
Chronic hazards to the aquatic environment	No Classification

Label elements

Pictogram or symbol	—
Signal word	—
Hazard statements:	—

<Additonal Solution >

GHS Classification

Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification
Skin corrosion/irritation	No Classification
Serious eye damage/eye irritation	No Classification
Acute hazards to the aquatic environment	No Classification
Chronic hazards to the aquatic environment	No Classification

Label elements

Pictogram or symbol	—
Signal word	—
Hazard statements:	—

<Gap Reapir Buffer >

GHS Classification

Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification
Skin corrosion/irritation	No Classification
Serious eye damage/eye irritation	No Classification
Acute hazards to the aquatic environment	No Classification
Chronic hazards to the aquatic environment	No Classification

Label elements

Pictogram or symbol	—
Signal word	—
Hazard statements:	—

<Gap Reapir Enzyme Mix >

GHS Classification

Acute toxicity (oral)	No Classification
Acute toxicity (dermal)	No Classification



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Skin corrosion/irritation	No Classification
Serious eye damage/eye irritation	No Classification
Acute hazards to the aquatic environment	No Classification
Chronic hazards to the aquatic environment	No Classification

Label elements	
Pictogram or symbol	—
Signal word	—
Hazard statements:	—

<KOD Master Mix >

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Acute toxicity (oral)	No Classification
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Acute hazards to the aquatic environment	No Classification
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Label elements	
Pictogram or symbol	—
Signal word	—
Hazard statements:	—

3 COMPOSITION / INFORMATION ON INGREDIENTS

<Tagmentation Buffer >

Chemical Product Mixture

Chemical Nature Aqueous solution

Main Component	wt%	CAS No. (EC No.)
Tris(hydroxymethyl)aminomethane	1%>	77-86-1
N,N-Dimethylformamide	20-30%	68-12-2
water	80%>	7732-18-5

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Chemical Product Mixture

Chemical Nature Aqueous solution

Main Component	wt%	CAS No. (EC No.)
4-(2-Hydroxyethyl)-1-piperazineethanesulfonic acid	10%>	7365-45-9
Glycerol	approx.50%	56-81-5
Disodium ethylenediaminetetraacetate dihydrate	0.1%>	6381-92-6
DNA	0.1%>	-
water	50%>	7732-18-5

<Additional Solution >

Chemical Product Mixture

Chemical Nature Aqueous solution

Main Component	wt%	CAS No. (EC No.)
Sodium dodecyl sulfate	1%>	151-21-3
DNA	0.1%>	-
Tris(hydroxymethyl)aminomethane	0.1%>	77-86-1
Disodium ethylenediaminetetraacetate dihydrate	0.1%>	6381-92-6

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water	approx.100%	7732-18-5
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Chemical Product Mixture
Chemical Nature Aqueous solution

Main Component	wt%	CAS No. (EC No.)
Tris(hydroxymethyl)aminomethane	1%>	77-86-1
Disodium ethylenediaminetetraacetate dihydrate	1%>	6381-92-6
Adenosine-5'-triphosphate	1%>	987-65-5
dATP	1%>	1927-31-7
dCTP	1%>	102783-51-7
dGTP	1%>	93919-41-6
dTTP	1%>	18423-43-3
water	90-100%	7732-18-5

< Gap Repair Enzyme Mix >

Chemical Product Mixture
Chemical Nature Aqueous solution

Main Component	wt%	CAS No. (EC No.)
Potassium dihydrogenphosphate	1%>	7778-77-0
Dipotassium hydrogenphosphate	1%>	7758-11-4
Disodium ethylenediaminetetraacetate dihydrate	0.1%>	6381-92-6
Glycerol	approx.50%	56-81-5
water	approx.50%	7732-18-5

< KOD Master Mix >

Chemical Product Mixture
Chemical Nature Aqueous solution

Main Component	wt%	CAS No. (EC No.)
Tris(hydroxymethyl)aminomethane	10%>	77-86-1
dATP	1%>	1927-31-7
dCTP	1%>	102783-51-7
dGTP	1%>	93919-41-6
dTTP	1%>	18423-43-3
Magnesium sulfate	1%>	7487-88-9
Disodium ethylenediaminetetraacetate dihydrate	0.1%>	6381-92-6
Polyethylene sorbitan monolaurate	0.1%>	9005-64-5
Polyoxyethylene nonylphenylether	0.1%>	9016-45-9
water	approx.90	7732-18-5

4 FIRST-AID MEASURES

Inhalation	Remove person to fresh air and keep at rest in a position comfortable for breathing. Consult a physician if you feel unwell.
Skin Contact	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. Vomit if possible. Seek medical attention, immediately.



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5 FIRE-FIGHTING MEASURES

Extinguishing Media	Water, Carbon Dioxide, Foam, Dry Chemical Powder
Specific extinguishing methods	Fire-fighting should be done from the windward side of fire area.
Protection of fire-fighters	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	Aspirate under reduced pressure, or soak up with cloth, paper or the like, and collect it in a disposal container.

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. Wash hands thoroughly after handling.
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

Control parameters

DNEL(N,N-Dimethylformamide)

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	6mg/m ³	human, inhalatory	worker (industry)	chronic svstemic effects
DNEL	1.1mg/kg/day	humam, dermal	worker (industry)	chronic svstemic effects

Engineering controls	Set up good ventilation and exhaust system in the work area. Provide washing facilities nearby.
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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. Additional Solution, Gap Repair Buffer and PCR Master Mix freeze at -20°C.
Colour	Colourless
Odour	None
pH	Not available
Flash Point	No flammability due to aqueous solution
Explosion limit	Not explosive
Density	Not available
Solubility	Soluble in water

10 STABILITY AND REACTIVITY



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

11 TOXICOLOGICAL INFORMATION

<Tagmentation Buffer>

Acute toxicity (oral):	No Classification
Acute toxicity (dermal):	No Classification
Acute toxicity (inhalation):	Exempt classification (Gas)
	Exempt classification (Vapour)
	Exempt classification (Dust/Mist)
Skin corrosion/irritation:	Category2
Serious eye damage/irritation:	Category2
Respiratory sensitization:	Classification not possible
Skin sensitization:	Classification not possible
Mutagenicity:	Category2
Carcinogenicity:	Category1B
Reproductive toxicity:	Category1B
Target organ effect/Single exposure:	Category 1 (liver), Category 2 (respiratory system)
Target organ effect/Multi exposure:	Category 1 (liver)
Respiratory toxic:	Classification not possible

Ingredient

N,N-Dimethylformamide

Acute toxicity (inhalation):	Category 3(steam) LC50: 4.7 mg/L[mouse]
Skin corrosion/irritation:	Category2
Serious eye damage/irritation:	Category2B
Mutagenicity:	Category2
Carcinogenicity:	Category1B
Reproductive toxicity:	Category1B
Target organ effect/Single exposure:	Category 1 (liver), Category 2 (respiratory system)
Target organ effect/Multi exposure:	Category 1 (liver)

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Serious eye damage/irritation:	No Classification
Respiratory sensitization:	Classification not possible
Skin sensitization:	Classification not possible
Mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Classification not possible
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

<Additional Solution>

Acute toxicity (oral):	No Classification
Acute toxicity (dermal):	No Classification
Acute toxicity (inhalation):	No Classification
Skin corrosion/irritation:	No Classification



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Serious eye damage/irritation:	No Classification
Respiratory sensitization:	Classification not possible
Skin sensitization:	Classification not possible
Mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Classification not possible
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

< Gap Repair Buffer >

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Respiratory sensitization:	Classification not possible
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Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Classification not possible
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

< Gap Repair Enzyme Mix >

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Serious eye damage/irritation:	No Classification
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Mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Classification not possible
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

< KOD Master Mix >

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Skin corrosion/irritation:	No Classification
Serious eye damage/irritation:	No Classification
Respiratory sensitization:	Classification not possible
Skin sensitization:	Classification not possible
Mutagenicity:	Classification not possible
Carcinogenicity:	Classification not possible
Reproductive toxicity:	Classification not possible
Target organ effect/Single exposure:	Classification not possible
Target organ effect/Multi exposure:	Classification not possible
Respiratory toxic:	Classification not possible

12 ECOLOGICAL INFORMATION

Ecotoxicity	N,N-Dimethylformamide
	Fish(Oryzias): LC50(96hr) > 100mg/L



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Persistence and degradability	persistent
Bioaccumulative potential	low concentration
Mobility in soil	Classification not possible

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 as dangerous goods. Follow all of the laws and regulations in your respective country.
Specific Precautions	To prevent packages from breaking, handle with care. Store at about -20°C when it is transported.

15 REGULATORY INFORMATION

Follow all of the laws and regulations in your country.

16 OTHER INFORMATION

Notice	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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