



Safety Data Sheet

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Identification of the product	GenNext NGS Library Prep Kit
Product Code	LPK-101, LPK-101T, LPK-101L
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

Most Important Hazards Few adverse human health effects are anticipated.

GHS Classification

Hazard class and category

		End Repair and A-tailing Enzyme	End Repair and A-tailing Buffer	Ligation solution
Physical Hazards	Flammable liquids	Not classified	Not classified	Not classified
Health Hazards	Acute toxicity - oral	Not classified	Not classified	Not classified
	Skin corrosion /Irritation	Category 3	Classification not possible	Classification not possible
	Serious eye damage /Eye irritation	Category 2B	Classification not possible	Classification not possible
Environmental Hazards		Classification not possible	Classification not possible	Classification not possible

		Library Amplification Master Mix
Physical Hazards	Flammable liquid	Not classified
Health Hazards	Acute toxicity - oral	Category 4
	Skin corrosion /Irritation	Category 3
	Serious eye damage /Eye irritation	Not classified
Environmental Hazards		Classification not possible

Label elements	End Repair and A-tailing Enzyme
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.



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2 HAZARDS IDENTIFICATION (Continued)

Label elements	Library Amplification Master Mix
Pictogram or symbol	
Signal word	Warning
Hazard statement	Harmful if swallowed. Causes mild skin irritation
Precautionary statement	
Prevention	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
Response	If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
Disposal	Dispose of contents/container in accordance with local/regional/national and international regulation.
	End Repair and A-tailing Buffer
	Ligation solution
	Library Amplification Primer Mix
Label elements	No

3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Product	Mixture	
Chemical Nature	Aqueous solution	
Parts Name	Main Component	CAS No. (EC No.)
End Repair and A-tailing	Tris(hydroxymethyl)aminomethane	77-86-1
Enzyme	Dithiothreitol	3483-12-3
	Glycerol	56-81-5
	DNA polymerase	(EC 2.7.7.7)
End Repair and A-tailing	Tris(hydroxymethyl)aminomethane	77-86-1
Buffer	Magnesium chloride	7786-30-3
	Dithiothreitol	3483-12-3
	Deoxyadenosine triphosphate	1927-31-7
	Deoxycytidine triphosphate	102783-51-7
	Deoxyguanosine triphosphate	93919-41-6
	Deoxythymidine triphosphate	18423-43-3
	Adenosine-5'-triphosphate disodium salt	51963-61-2
Ligation solution	Tris(hydroxymethyl)aminomethane	77-86-1
	Magnesium chloride	7786-30-3
	Dithiothreitol	3483-12-3
	Adenosine-5'-triphosphate disodium salt	51963-61-2
	Polyethylene glycol	25322-68-3
	Glycerol	56-81-5
	T4 DNA Ligase	(EC 6.5.1.1)
Library Amplification	Tris(hydroxymethyl)aminomethane	77-86-1
Master Mix	Magnesium sulfate	7487-88-9
	Deoxyadenosine triphosphate	1927-31-7
	Deoxycytidine triphosphate	102783-51-7
	Deoxyguanosine triphosphate	93919-41-6
	Deoxythymidine triphosphate	18423-43-3
	Additive A	Nondisclosure
	DNA polymerase	(EC 2.7.7.7)
	Monoclonal antibody	—
	Glycerol	56-81-5
	Poly(oxyethylene) nonylphenylether	9016-45-9
Library Amplification	Deoxyribonucleic acid	—
Primer Mix		

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3 COMPOSITION / INFORMATION ON INGREDIENTS (Continued)

Components Contributing to the Hazard

Common Chemical Name (or Generic Name)	Glycerol	Poly(oxyethylene)n onylphenyl ether	Additive A
Synonyms	Glycerin	Nonidet P-40	-
Parts contained	End Repair and A- tailing Enzyme Ligation solution Library Amplification Master Mix	Library Amplification Master Mix	Library Amplification Master Mix
Chemical formula	CH ₂ (OH)CH(OH) CH ₂ (OH)	Not specified	Nondisclosure
CAS No.	56-81-5	9016-45-9	Nondisclosure
Concentration	approximately 50%	< 0.01%	< 3%

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.

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



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8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

Permissible concentration		
Occupational exposure limit	Glycerol (mist)	Poly(oxyethylene)nonylphenyl ether
JSOH OEL	not established	not established
ACGIH TLV	10mg/m ³	not established
OSHA PEL	total dust: 15mg/m ³ TWA respirable fr.: 5mg/m ³ TWA	not established
Engineering controls	Set up good ventilation and exhaust system in the work area. Provide washing facilities nearby.	
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. End Repair and A-tailing Buffer, Ligation Solution, Library Amplification Master Mix, and Library Amplification Primer Mix freeze at -20°C.	
Colour	Colourless	
Odour	None	
pH	6.0-9.5	
Flash Point	No flammability due to aqueous solution	
Explosion limit	Not explosive	
Density	1.0~1.2(g/cm ³)	
Solubility	Soluble in water	

10 STABILITY AND REACTIVITY

Stability	Stable at below -20°C.
Possible Hazardous	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

Toxicological information on the component of this product			
Acute Toxicity	Not Available		
Local Effects	May cause eye and skin irritation.		
Toxicological information on the component of this product			
	Glycerol	Poly(oxyethylene) Nonylphenylether	Additive A*
Acute toxicity (LD50)	Oral-mouse: 4090mg/kg	Oral-mouse: 3500mg/kg	Oral-rat: 50mg/kg
	Oral-rat: 12.6g/kg	Oral-rat: 4190mg/kg	Dermal-rat: 537mg/kg
Skin corrosion/Irritation	Category 3	Category 3	Category 2
Serious eye damage/Eye irritation	Category 2B	Category 2A	Category 2A



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*: Allied substance data



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12 ECOLOGICAL INFORMATION

Ecotoxicity	Glycerol
	Fish(Rainbow trout): LC50(96hr) 54g/L
	(Gold fish): LC50(24hr) > 5g/L
	Crustacea(Daphnia magna): EC50(24hr) > 10g/L
	Algae(Red algae): EC50(28hr) 4.6g/L

Persistence and degradability Glycerol, enzymes and nucleic acid related components are biodegradable.

Bioaccumulative potential	Ingredients are considered to have no bioaccumulative potential.
Mobility in soil	Soluble in water and diffusible into water environment.

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.

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 as 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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