

1. Identification of Substance

1. 1 Product Name: Reagent Kits List:

General Chemistry I Lyophilized Kit

(TP, LB, GLO, A/G, TBIL, DBIL, IBIL, ALT, AST, CRE, UREA, UA, TG, CHOL, GLU, HDL-C, LDL-C)

Clinical Emergency Lyophilized Kit

(AST, CK, CK-MB, LDH, α -HBDH, AMY, CRE, UA, CO₂, K, Na, Cl, GLU)

Renal Function Panel Lyophilized Kit

(ALB, CRE, UREA, UA, CO₂, Ca, P)

Liver Function Panel Lyophilized Kit

(TP, ALB, GLO, A/G, TBIL, DBIL, IBIL, ALT, AST, GGT, ALP)

Myocardial Enzyme Panel Lyophilized Kit

(AST, CK, CK-MB, LDH, α -HBDH)

Electrolyte Panel Lyophilized Kit

(CO₂, K, Na, Ca, P, Mg, Cl)

Glucose and lipid Panel Lyophilized Kit

(TG, CHOL, HDL-C, LDL-C, GLU, GSP)

General Chemistry II Lyophilized Kit

(AMY, CRE, UREA, CO₂, K, Na, Cl, GLU)

Liver and Renal Function Lyophilized Kit

(TP, ALB, GLO, A/G, TBIL, ALT, AST, GGT, CRE, UREA, GLU)

1. 2 Catalogue Number: MNCHIP reagent disc types

1. 3 Manufacturer: Building 2, No. 19 Xinhuanxi Road, TEDA Tianjin 300457, P.R. China

1. 4 Emergency Call: +86 22 59861168

2. Hazards Identification

2. 1 General:

Not Properly Handled this may be irritating to skin, eyes.

2. 2 Hazard Symbol:

Not Regulated as dangerous

2. 3 Risk Codes:

None required

2. 4 Environment:

Keep away from drains, surface and ground water, and soil to avoid possible contamination.

Material Safety Data Sheet

3. Composition and Information on Ingredients

3.1 Hazardous Ingredients per EU Quaternary Ammonium Salts <6.5% criteria:

Assay	Material Name	CAS No.	Character
ALT	Tris	77-86-1	White crystal
	L-Alanine	56-41-7	White crystal
	α -Ketoglutaric acid	328-50-7	White powder
	Sodium Chloride	7647-14-5	White crystal
	D-Trehalose Dihydrate	6138-23-4	White powder
	D-Sorbitol	50-70-4	White powder
	Bovine Serum Albumin	9048-46-8	Yellowish powder
	NADH	58-68-4	White powder
	D-lactate Dehydrogenase	1.1.1.28	White powder
AST	Ammonium sulfate	7783-20-2	Clear crystal
	D-lactate Dehydrogenase	1.1.1.28	White powder
	Tris	77-86-1	White crystal
	L-aspartic Acid	56-84-8	White powder
	α -Ketoglutaric acid	328-50-7	White powder
	NADH	58-68-4	White powder
	Malate Dehydrogenase	1.1.1.37	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Dextran 40000	9004-54-0	White powder
	Cholic acid sodium salt	361-09-1	White powder
Cl	Ethylenediamine Tetraacetic Acid	60-00-4	White powder
	Morpholine Ethyl Sulfonic Acid	4432-31-9	White powder
	Alpha Amylase	3.2.1.1	White powder
	Calcium Acetate Monohydrate	5743-26-0	White powder
	D-Mannitol	69-65-8	White powder
	2-chloro-4-nitrophenol maltoglycoside	---	Yellowish powder
CO2	Tris	77-86-1	White crystal
	D-Mannitol	69-65-8	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Starch, soluble	9005-84-9	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	Phosphoenolpyruvate	138-08-9	White powder
	NADH	58-68-4	White powder

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	Malate Dehydrogenase	1.1.1.37	White powder
	Phosphoenolpyruvate carboxylase	4.1.1.31	White powder
CHOL	β-Nicotinamide-adenine dinucleotide, (NAD) , free acid, Grade II	53-84-9	Yellowish powder
	Cholesterol Esterase	3.1.1.13	Brownish powder
	Cholesterol Dehydrogenase	67775-34-2	White powder
	Tris	77-86-1	White crystal
	Bovine serum albumin	9048-46-8	Yellowish powder
	Sodium Chloride	7647-14-5	White crystal
	D-Trehalose Dihydrate	6138-23-4	White powder
	myo-Inositol	87-89-8	White powder
CRE	Creatinase	3.5.3.3	White powder
	Sarcosine oxidase	1.5.3.1	Yellow powder
	Ascorbate Oxidase	1.10.3.3	Light blue powder
	2,4, 6-tribromo-3-hydroxybenzoic acid	14348-40-4	Yellowish powder
	Bovine serum albumin	9048-46-8	White powder
	Peroxidase	1.11.1.7	reddish-brown powder
	Creatinine enzyme	3.5.2.10	White powder
	4-Aminoantipyrine Hydrochloride	22198-72-7	Yellowish powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Potassium Ferrocyanide	14459-95-1	faint yellow powder
HBDH	D-Mannitol	69-65-8	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Dextran 10000	9004-54-0	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	NADH	58-68-4	White powder
	Sodium 2-oxobutyrate	2013-26-5	White powder
	Sodium phosphate dibasic dodecahydrate	10039-32-4	White powder
	Potassium phosphate monobasic	7778-77-0	White powder
Mg	Tris	77-86-1	White crystal
	D-Trehalose Dihydrate	6138-23-4	White powder
	Polyethylene Glycol 8000	25322-68-3	White powder
	D-glucose	50-99-7	White powder
	NADP Sodium Salt	53-59-8	White powder
	ATP Sodium Salt	34369-07-8	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	Hexokinase	2.7.1.1	Yellowish powder
	Glucose-6-phosphate Dehydrogenase	1.1.1.49	White powder

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Na	Bovine serum albumin	9048-46-8	Yellowish powder
	β -Galactosidase	3.2.1.23	White powder
	Tris	77-86-1	White crystal
	D-Trehalose Dihydrate	6138-23-4	White powder
	Dextran 10000	9004-54-0	White powder
	O-Nitrobenzene β -D-galactopyranoside	369-07-3	White powder
	D-Mannitol	69-65-8	White powder
LDH	Tris	77-86-1	White crystal
	Iodonitrotetrazolium chloride	146-68-9	Yellow powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Diaphorase	1.6.5.2	Yellowish powder
	β -Nicotinamide-adenine dinucleotide, (NAD), free acid, Grade II	53-84-9	Yellowish powder
	Dextran 40000	9004-54-0	White powder
P	NAD Sodium Salt	20111-18-6	White powder
	α -D-Glucose-1-6-diphosphate potassium salt hydrate	91183-87-8	Clear crystal
	D-(+)-Maltose monohydrate	6363-53-7	White powder
	PIPES	5625-37-6	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	Magnesium chloride hexahydrate	7791-18-6	Clear crystal
	Maltose phosphorylase	2.4.1.8	White powder
	β -Phosphoglucomutase	5.4.2.6	White powder
	Glucose-6-phosphate Dehydrogenase	1.1.1.49	White powder
TBIL	PIPES	5625-37-6	White powder
	Polyethylene Glycol 3350	25322-68-3	White powder
	D-Mannitol	69-65-8	White powder
	Cholic acid sodium salt	361-09-1	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	Bilirubin oxidase	1.3.3.5	Blue powder
TP	Copper sulfate pentahydrate	7758-99-8	Blue crystal
	Potassium iodide	7681-11-0	White powder
	Sodium hydroxide	1310-73-2	White powder
	Sodium carbonate	497-19-8	White powder
TG	Lipoprotein esterase	3.1.1.34	White powder
	Diaphorase	1.6.5.2	Yellowish powder
	Glycerol kinase	2.7.1.30	White powder
	NAD Sodium Salt	20111-18-6	White powder
	D-Mannitol	69-65-8	White powder

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	Dextran 10000	9004-54-0	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	ATP Sodium Salt	34369-07-8	White powder
	Iodonitrotetrazolium chloride	146-68-9	Yellow powder
	Potassium phosphate dibasic	7758-11-4	White powder
	Potassium phosphate monobasic	7778-77-0	White powder
UA	D-Mannitol	69-65-8	White powder
	Polyethylene Glycol 8000	25322-68-3	White powder
	Dextran 10000	9004-54-0	White powder
	Uricase	1.7.3.3	White powder
	Peroxidase	1.11.1.7	reddish-brown powder
	Ascorbate oxidase	1.10.3.3	Light blue powder
	TAPS	29915-38-6	White crystal
	DHBSA	54970-72-8	White powder
	Potassium ferrocyanide	14459-95-1	faint yellow powder
K	Phosphoenolpyruvate	138-08-9	White powder
	Adenosine diphosphate	58-64-0	White powder
	NADH	58-68-4	White powder
	Pyruvate kinase	2.7.1.40	White powder
	Glutamate dehydrogenase	1.4.1.2	White powder
	α -Ketoglutaric acid	328-50-7	White powder
	myo-Inositol	87-89-8	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Starch, soluble	9005-84-9	White powder
	Tris	77-86-1	White crystal
	D-lactate dehydrogenase	1.1.1.28	White powder
UREA	Tris	77-86-1	White crystal
	α -Ketoglutaric acid	328-50-7	White powder
	Adenosine 5'-Diphosphate Monopotassium Salt	72696-48-1	White powder
	NADH	58-68-4	White powder
	Glutamate dehydrogenase	1.4.1.2	White powder
	Urease	3.5.1.5	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Cholic acid sodium salt	361-09-1	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
ALP	Polyethylene Glycol 3350	25322-68-3	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder

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	Magnesium chloride hexahydrate	7791-18-6	Clear crystal
	Para-nitro-pheneye phosphate	68189-42-4	White powder
CK	D-Trehalose Dihydrate	6138-23-4	White powder
	N-Acetyl-L-cysteine	616-91-1	White crystal
	Di(adenosine-5,) trilithium pentaphosphate	75522-97-3	White powder
	D-glucose	50-99-7	White powder
	NADP potassium salt	53-59-8	White powder
	Starch, soluble	9005-84-9	White powder
	Adenosine 5'-Diphosphate Monopotassium Salt	58-64-0	White powder
	Creatine disodium phosphate	922-32-7	White powder
	Hexokinase	2.7.1.1	Yellowish powder
	Glucose-6-phosphate dehydrogenase	1.1.1.49	White powder
CK-MB	Imidazole	288-32-4	White powder
	Di(adenosine-5,) trilithium pentaphosphate	75522-97-3	White powder
	D-glucose	50-99-7	White powder
	NADP potassium salt	53-59-8	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	myo-Inositol	87-89-8	White powder
	Adenosine 5'-Diphosphate Monopotassium Salt	58-64-0	White powder
	Hexokinase	2.7.1.1	Yellowish powder
Glucose-6-phosphate dehydrogenase	1.1.1.49	White powder	
DBIL	Polyethylene Glycol 3350	25322-68-3	White powder
	D-Mannitol	69-65-8	White powder
	myo-Inositol	87-89-8	White powder
	Citric acid	77-92-9	White powder
	Bilirubin oxidase	1.3.3.5	Blue powder
GLU	PIPES	5625-37-6	White powder
	Adenosine triphosphate sodium salt	56-65-5	White powder
	β -Nicotinamide-adenine dinucleotide, (NAD), free acid, Grade II	53-84-9	Yellowish powder
	Hexokinase	2.7.1.1	Yellowish powder
	Glucose-6-phosphate dehydrogenase	1.1.1.49	White powder
	Polyethylene Glycol 8000	25322-68-3	White powder
	D-Mannitol	69-65-8	White powder
GGT	γ -L-Glutamyl-3-carboxy-4-nitroanilide monoammonium	63699-78-5	White powder

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	Glycylglycine	556-50-3	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder
	D-Mannitol	69-65-8	White powder
	Macergo 8000	25322-68-3	White powder
	Cholic acid sodium salt	361-09-1	White powder
GSP	Nitrotetrazolium blue chloride	298-83-9	Yellow powder
	Sodium phosphate dibasic dodecahydrate	10039-32-4	White powder
	Sodium hydroxide	1310-73-2	White crystal
	D-Mannitol	69-65-8	White powder
HDL-C	Sodium 3-(N-ethyl-3-methylanilino)-2-hydroxypropylsulfonate	679787-10-1	White crystal
	Cholesterol Esterase	3.1.1.13	Brownish powder
	Cholesterol oxidase	1.1.3.6	Yellow powder
	4- amino antipyrine	83-07-8	Yellow powder
	Peroxidase	1.11.1.7	reddish-brown powder
	PIPES	5625-37-6	White powder
	D-Mannitol	69-65-8	White powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Dextran Sulfate Sodium Salt	9011-18-1	White powder
	Magnesium chloride hexahydrate	7791-18-6	Clear crystal
Ca	8-Hydroxyquinoline-5-sulfonic acid	207386-92-3	Yellow powder
	Arsenazo III sodium salt	1668-00-4	Purple powder
	D-Trehalose Dihydrate	6138-23-4	White powder
	Cholic acid sodium salt	361-09-1	White powder
ALB	Bromocresol green	76-60-8	Yellow crystal
	Sodium Chloride	7647-14-5	White crystal
	Sucrose	57-50-1	White crystal
AMY	MES monohydrate	4432-31-9	White powder
	2-chloro-4-nitrophenol maltoglycoside	---	Yellowish powder
	D-Mannitol	69-65-8	White powder
	Cholic acid sodium salt	361-09-1	White powder
	Bovine serum albumin	9048-46-8	Yellowish powder

3. 2 Potential Health Effect:

Irritation of skin, eyes, and mucous membrane may be resulted in by Exposure.

3. 3 Product Hazard Classifications	EU	US OSHA	WHMIS
	Xi; R36/37/38	Yes	Exempt

3.4 Reactivity

Minima Risk

4. First Aid Measures

Ingestion:

Call physician for medical attention if the product is taken internally.

Do not attempt to induce vomiting, or to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious.

5. Fire-fighting Measures

5.1 Fire and Explosion Hazard:

Not applicable

5.2 Extinguishing Media:

Use extinguishing media for surrounding fire.

5.3 Special Fire and Explosion Hazard:

No special hazards.

5.4 Hazardous Combustion Products:

No combustion products posing significant hazards are expected from this product.

5.5 Protective Equipment for Firefighters:

Self-contained breathing apparatus and full protective equipment are recommended for firefighters.

6. Accidental Release Measures

6.1 Personal Precautions:

Use good laboratory procedures

6.2 Clean-up Methods:

Wipe up spill and place in containers suitable for disposal.

6.3 Environmental Precautions:

For large spills, take precautions to prevent entry into waterways, sewers, or surface waters.

7. Handling and Storage

7.1 Safe Handling:

Avoid contact with eyes. Use good laboratory procedures.

7.2 Recommended Storage Condition:

Keep in the original packaging at the labeled temperature.

7.3 Protection against Explosion And Fires:

No special measures required. Refer to the product label for additional information on storage conditions.

8. Handling and Storage

- 8.1 Engineering Controls:
Use in well-ventilated rooms.
No special engineering controls are required.
- 8.2 Respiratory Protection:
Under normal conditions. No respiratory protection is required of the use of this product.
- 8.3 Hand Protection:
Impervious gloves are recommended if hand contact with the material is anticipated.
- 8.4 Eye Protection:
Safety glasses or goggles are recommended if danger of splashes may be present.
- 8.5 Skin Protection:
Laboratory coat or appropriate clothing is needed when working with the product.

9. Chemical and Physical Properties

Appearance	Beads
Color	Colorless, transparent
Odor	Pungent
Boiling Point	N/A
Melting Point	N/A
Flash Point	N/A
Flammability	Not flammable
Auto Flammability	Not flammable
Density	N/A
Solubility	N/A

10. Chemical and Physical Properties

- 10.1 Stability:
Stable under normal temperatures and pressures.
- 10.2 Materials to Avoid:
Incompatible with acids, bases and strong oxidizers.
- 10.3 Conditions to Avoid:
None determined.
- 10.4 Hazardous Decomposition Products:
No dangerous decomposition products known.

11. Stability and Reactivity

- 11.1 Chemical Stability
Stable under proper operation and storage conditions.
- 11.2 Conditions to avoid
Incompatible materials, heat, flame and spark.
- 11.3 Taboo Things
N/A

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11.4 Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products shouldn't be produced.

12. Toxicological Information

According to currently available data, this product has not yet produced health damages. Anyway, it must be handled carefully according to good industrial practices. This product may have slight health effects on sensitive people, by inhalation and/or cutaneous absorption and/or contact with eyes and/or ingestion.

Information on toxicological effects:
Information not available.

13. Ecological Information

General Notes:

Do not introduce undiluted product or large quantities of it to reach surface water, water supply, or sewage system.

14. Disposal Considerations

Waste Disposal:

Dispose unused product, packaging in accordance with local regulations. If unsure of the applicable requirements, contact the authorities for information.

15. Transport Information

Transportation of this product not regulated according to the definition of hazardous in 49CFR (US DOT). Transportation of this product is also not regulated by IATA, ICAO, Canadian TDG or European ADR.

16. Regulatory Information

SARA 313	No compounds listed.
CERCLA RG's, 40 CFR 302.4	No compounds listed.
California Proposition 65	No compounds listed.
Massachusetts MSL	No compounds listed.
New Jersey Dept. of Health RTK List	No compounds listed.
Pennsylvania RTK	No compounds listed.
Designation according to EC Guidelines	No marking required.

17. Other Information

This document is based on our present knowledge and relevant scientific literatures. Labnovation

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Material Safety Data Sheet

Technologies, Inc. makes no warranty or representation as to its accuracy, or validity. Users should consider these data only as supplement to other information gathered by them and must make independent determination of the suitability and completeness of information from all sources to ensure proper use and disposal of these materials and for the safety and health of employees and customers.