

1. Identification of Substance

Product and Company Identification

Product Name: Reagent Kits List:

General Chemistry I Lyophilized Kit

(TP, ALB, TBIL, DBIL, ALT, AST, CRE, UREA, UA, TG, CHOL, GLU, HDL-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, Ca²⁺, P)

Liver Function Panel Lyophilized Kit

(TP, ALB, TBIL, DBIL, ALT, AST, GGT, ALP)

Myocardial Enzyme Panel Lyophilized Kit

(AST, CK, CK-MB, LDH, α -HBDH)

Electrolyte Panel Lyophilized Kit

(CO₂, K⁺, Na⁺, Ca²⁺, P, Mg²⁺, Cl⁻)

Glucose and lipid Panel Lyophilized Kit

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

General Chemistry II Lyophilized Kit

(AMY, CRE, UREA, CO₂, K⁺, Na⁺, Cl⁻, GLU)

Liver and Renal Function Lyophilized Kit

(TP, ALB, TBIL, ALT, AST, GGT, CRE, UREA, GLU)

General Chemistry IV Lyophilized Kit

(TP, ALB, TBIL, DBIL, ALT, AST, UREA, CRE, UA, GLU, TG, CHOL, HDL-C, GGT, ALP)

General Chemistry V Lyophilized Kit

(ALT, AST, UREA, CRE, CK, CK-MB, LDH, GGT, ALP)

Ammonia Panel Lyophilized Kit

(NH₃)

Catalogue Number: MNCHIP reagent disc types

Effective: 29/10/2022

Manufacturer: Building2, No.19 Xinhuanxi Road, TEDA Tianjin 300457, P.R. China

Emergency Call: +86 (0)22 59861168

2. Hazards Identification

Potential Health Effects:

Inhalation	May cause respiratory tract irritation
Skin	May cause skin irritation
Eyes	May cause eye irritation

EU	US OSHA	WHMIS	Reactivity: Minima risk
Xi; R36/37/38	Yes	Exempt	Hazard Symbol: Not Regulated

as a dangerous or hazardous substance.

Risk Codes: None required

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

3. Composition and Information on Ingredients

This product consists of reagent beads comprised of a mixture of low hazard lyophilized chemical beads enclosed in a plastic rotor. These beads are in concentrations not associated with human or environmental toxicity, which contain among the listed items, enzymes, preservatives and stabilizers in concentrations under 1%. Each rotor contains a cup of diluent containing less than 0.5 ml of water and preservatives in concentrations of less than 1%.

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

Assay	Material Name	CAS No.	Character
ALT	Tris	77-86-1	White solid
	L-Alanine	56-41-7	White solid
	α -Ketoglutaric acid	328-50-7	White powder
	Sodium Chloride	7647-14-5	White solid
	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 sulfat	7783-20-2	Clear solid

Effective: 20/09/2022

	D-lactate Dehydrogenase	1.1.1.28	White powder
	Tris	77-86-1	White solid
	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
CO ₂	Tris	77-86-1	White solid
	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
	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 solid
	Bovine serum albumin	9048-46-8	Yellowish powder
	Sodium Chloride	7647-14-5	White solid
	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
α -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^{2+}	Tris	77-86-1	White solid
	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
Na^{+}	Bovine serum albumin	9048-46-8	Yellowish powder
	β -Galactosidase	3.2.1.23	White powder
	Tris	77-86-1	White solid
	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 solid
	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 solid

	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 solid
	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 solid
	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
	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 solid
	DHBSA	54970-72-8	White powder
	Potassium ferrocyanide	14459-95-1	faint yellow powder
K ⁺	Phosphoenolpyruvate	138-08-9	White powder

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	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 solid
	D-lactate dehydrogenase	1.1.1.28	White powder
UREA	Tris	77-86-1	White solid
	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
	Magnesium chloride hexahydrate	7791-18-6	Clear solid
	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 solid
	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

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	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
	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 solid
	D-Mannitol	69-65-8	White powder
HDL-C	Sodium 3-(N-ethyl-3-methylanilino)-2-hydroxypropylsulfonate	679787-10-1	White solid
	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 solid
Ca ²⁺	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 solid
	Sodium Chloride	7647-14-5	White solid
	Sucrose	57-50-1	White solid
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
NH ₃	Potassium dihydrogen phosphate	7778-77-0	White solid
	Sodium dihydrogen phosphate	10039-32-4	White solid
	α -Ketoglutaric acid	328-50-7	White solid
	Adenosine diphosphate	58-64-0	White solid
	Reduced Coenzyme I	58-68-4	White solid
	Glutamate dehydrogenase	1.4.1.3	White solid
	D-Trehalose	6138-23-4	White solid
	Dextran40000	9004-54-0	White solid
	Cane sugar	57-50-1	White solid
	Bovine serum albumin	9048-46-8	Yellow solid

4. First Aid Measures

In case of eye contact:	Flush eyes with copious amounts of water for a minimum of 15 minutes
In case of inhalation:	Allow the victim to rest in a well-ventilated area. Seek immediate medical attention
In case of skin contact:	Flush exposed skin with copious amounts of water for a minimum of 15 minutes
In case of ingestion:	Contact a physician in case of ingestion

No flammable properties are associated with this product.

Extinguishing media:	Use water spray, dry chemical or carbon dioxide
Special protective equipment for firefighters:	Wear self-contained breathing apparatus for firefighting if necessary
Hazardous combustion products:	May result in the formation of nitrogen and carbon oxides
Additional information:	Combustion of the plastic rotor containing this preparation may result in toxic particulates and gases.

6. Accidental Release Measures

Personal Precautions:

Eye Protection	Wear safety goggles or a face shield when cleaning up spills
Skin Protection	Wear protective attire that prevents contamination of skin and personal clothing
Hand Protection	Wear nitrile or vinyl gloves that cover exposed skin
Other Protections	Avoid breathing mists, dusts, and aerosols

Clean-up Measures:

Contain the material to prevent it from becoming airborne
Place absorbent material on top of, and around the perimeter of the spill
Sweep up the spilled material and decontaminate the area with soap and water or an equivalent cleaner

Environmental Precautions:

Prevent spilled product from entering drains

7. Handling and Storage

This product is to be stored inside its packaging at 2-8°C in a cool, dry location. Wear gloves when handling the product and wash hands after removing gloves.

8. Exposure Controls and Personal Protection

Engineering Controls:	Provide ventilation in work areas where this product is handled.
Respiratory Protection:	Under normal conditions. No respiratory protection is required of the use of this product.
Hand Protection:	Impervious gloves recommended
Eye Protection:	Safety glasses or goggles recommended

Skin Protection:

Laboratory coat or appropriate clothing recommended

9. Chemical and Physical Properties

Physical state:	Solid. Spherical lyophilized beads are enclosed in a sealed plastic package
Color:	Multi-colored beads
Odor:	Odorless
Odor threshold:	None established
Chemical Properties:	None available for: <ul style="list-style-type: none"> ● pH, Melting point ● Boiling point ● Flash point ● Lower Explosive Limit ● Upper Explosive Limit ● Vapor pressure ● Vapor density (air=1) ● Density (g/cm³) ● Water solubility (20°C in g/l) ● Auto ignition temperature

10. Stability and Reactivity

Reactivity:	This preparation is not known to be reactive violently
Chemical Stability:	This preparation is known to be chemically stable
Conditions to Avoid:	Sunlight, heat (temperatures above 32°C)
Incompatible Materials:	No data available
Hazardous Decomposition Products:	No harmful decomposition products known
Storage Conditions:	Store in a cool (2-8°C), dry location

11. Toxicological Information

Toxicity Data	N/A
Potential Effects of Acute Exposure	May cause irritation of the nose, throat, skin, and eyes.
Potential Effects of Chronic Exposure	Long-term exposure may result in liver toxic.
Symptoms of Overexposure	Chronic overexposure may produce effects similar to acute exposure.
Carcinogenicity	This product does not contain a reportable concentration($\geq 0.1\%$) of any ingredient listed as carcinogen by 67/548/EEC Annex I.

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No information found. This preparation is very soluble in water, and is not anticipated to present adverse ecotoxicological effects.

13. Disposal Considerations

Waste Treatment Methods:	Check regional waste requirements
Waste Treatment Options:	Treatment options approved by local authorities
Sewage Disposal Options:	Check with local authorities before discharge to the sewer
Other Disposal Recommendations	Dispose of according to local, state, and national regulatory requirements

14. Transport Information

Follow federal and local regulations.

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.

15. 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.

EU Labeling Classification

Xi



R36/37/38 Irritating to eyes and skin

16. Other Information

The above information is believed to be correct but does not purport to be inclusive and shall be used only as a guide. MNCHIP 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.

If for internal purposes only, unlimited paper copies of this MSDS are permitted.

Material Safety Data Sheet