Safety Data Sheet

1. Product and Company Identification

1.1	**Product name**	**Microprotein Reagent**
	Substance/mixture	Mixture
	CAS #	Mixture
	Kit number	MD-101104
1.2	**Recommended product use**	
	Mixture's intended use	Diagnostic reagent for IN VITRO quantitative measurement of microprotein in urine.
	Product restrictions	None known
1.3	**Details of the supplier of the safety data sheet**	
	Manufacturer information	
	Corporate Headquarters	Diamond Diagnostics Inc. 333 Fiske St., Holliston, MA 01746 United States of America www.diamonddiagnostics.com
	Telephone	+1 (508) 429-0450
	Email	support@diamonddiagnostics.com
	Distributor information	
	Distributor Headquarters	Mission Diagnostics LLC 1 Burton Dr., Meridith, NH 03246 United States of America
	Telephone	+1 (508) 429-0450
	Email	support@diamonddiagnostics.com
1.4	**Emergency Telephone**	
	Emergency Phone #	+1 (508) 429-0450

2. Hazards Identification

GHS- Classification

Classification Reproductive toxicity - category 2, Specific target organ toxicity - single exposure - category 2

2.1	**Substance or mixture classification**	
	Physical state	Liquid
	Appearance	Clear/colorless
	Emergency overview	Health injuries are not known or expected under normal use.
2.2	**Label Elements**	
	Signal word	Warning
	Hazardous substances	Methanol, Polyethylene glycol mono(octylphenyl) ether
	OSHA regulatory status	This product is hazardous according to OSHA 29CFR 1910.1200.

2.3 Potential health effects

Routes of exposure	Skin contact. Eye contact.
Eyes	May cause eye irritation or serious eye damage.
Skin	May cause skin irritation or skin burns.
Inhalation	In high concentrations, vapors may be irritating to the upper respiratory tract leading to chemical pneumonitis and pulmonary edema.
Ingestion	If swallowed, may cause discomfort and lead to gastrointestinal tract burns.
Target organs	Eyes, lungs and skin.
Chronic effects	Repeated skin contact may cause dermatitis.
Signs and symptoms	Direct contact with skin and eyes may cause irritation.

2.4 Potential environmental effects

The product components are not classified as environmentally hazardous. However, this does not eliminate the possibility that large or frequent spills can have a harmful or damaging impact on the environment.

Hazard Statements

H361	Suspected of damaging fertility or unborn child.
H370	Causes damage to organs.

Precautionary Statements

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P308+P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P405	Store locked up.
P501	Dispose of contents in accordance with local regulations.

3. Composition/Information on ingredients

Components:

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Methanol	CAS number: 67-56-1 EC number: 200-659-6	Flam. Liq. 2; H225 Acute Tox. 3 (Oral); H301 Acute Tox. 3 (Dermal); H311 Acute Tox. 3 (Inh); H331 STOT SE 1; H370 Specific concentration limit(s): STOT SE 1; H370: C ≥10% STOT RE 2; H373: 3%≤ C <10% Acute Toxicity Estimate: Oral ATE: 100 mg/kg Dermal ATE: 300 mg/kg Inhalation ATE: 3 mg/L	2

Chemical name	CAS-No.	Classification	Concentration (% w/w)
Glycine	CAS number: 56-40-6 EC number: 200-272-2	Not classified;	0.75
Polyethylene glycol mono(octylphenyl) ether	CAS number: 9036-19-5	Acute Tox. 4 (Oral); H302 Eye Dam. 1; H318 Aquatic Chronic 2; H411 Acute Toxicity Estimate: Oral ATE: 500 mg/kg	0.25

4. First Aid Measures

4.1 Description of First Aid Measures

Eye Contact Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Skin Contact Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

Inhalation If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

Ingestion If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Notes to Physician Provide general supportive measures and treat symptomatically.

General Advice If you feel unwell, seek medical advice.

Acute Symptoms and Effects

May cause damage to organs. Effects are dependent on exposure (dose, concentration, contact time).

Delayed Symptoms and Effects

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

4.2 Most important symptoms and effects, both acute and delayed

Eye Contact Causes serious eye damage

Skin Contact Causes skin irritation

Inhalation Causes corrosion of the breathing system

Ingestion Causes corrosion of the digestion system

5. Fire-Fighting Measures

5.1 Flammable properties

This product is not flammable.

5.2 Extinguishing media

Suitable extinguishing media

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media

Do not use water jet.

5.3 Protection of firefighters

Specific hazards arising from the chemical

Thermal decomposition may produce irritating/toxic fumes/gases.

Protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts.

Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers.

Avoid unnecessary run-off of extinguishing media which may cause pollution.

Firefighting equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials. Avoid contaminating surface water with fire extinguishing water.

Hazardous combustion Products

Hazardous combustion gases or vapors may develop in the event of fire.

6. Accidental Release Measures

6.1 Personal precautions

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

6.3 Methods for containment and cleaning up

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

6.4 Other information

For personal protective equipment see Section 8. For disposal see Section 13.

7. Handling and Storage

7.1 Safe Handling

Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

Hygiene Measures

Wash exposed skin thoroughly after handling

7.2 Storage

Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10). Store between +2°C and +8°C

7.3 Specific use

See section 1 – Recommended Use

8. Exposure Controls / Personnel

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methanol 67-56-1	260 mg/m3	260 mg/m3	260 mg/m3
Glycine 56-40-6	Not listed	Not listed	Not listed
Polyethylene glycol mono(octylphenyl) ether 9036-19-5	Not listed	Not listed	Not listed

8.1 Occupational exposure limits

No exposure limits noted for ingredient(s).

Exposure guidelines Follow standard monitoring procedures.

Engineering controls Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities.

8.2 Personal protective equipment

Eye / face protection Wear appropriate safety glasses, goggles or face shields.

Skin protection Wear lab coat or other protective garments. Wear protective gloves. Remove any contaminated clothing promptly.

Respiratory protection If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Other information Do NOT eat, drink or smoke during use.

Environment Exposure Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance Liquid

Physical state Liquid

Form Liquid

Color Clear red/pink

Odor No data available

Odor threshold No data available

pH 2.30

Vapor pressure No data available

Vapor density No data available

Boiling point No data available

Viscosity (mm^2/s) No data available

Melting/Freezing point No data available

Solubility (water) No data available

Specific gravity	No data available
Flash point	No data available
Flammability limits in air, upper, % by volume	No data available
Flammability limits in air, lower, % by volume	No data available
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Evaporation rate	No data available
Relative Density	No data available
Partition coefficient: (n-octanol/water)	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. Stability and Reactivity

10.1 Reactivity Not reactive under recommended handling and storage conditions.

10.2 Chemical stability Material is stable under normal conditions.

10.3 Possibility of hazardous Reactions

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4 Conditions to avoid Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials None known

10.6 Hazardous polymerization No data available

10.7 Hazardous decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available

Substance Data:

Name	Route	Result
Glycine	oral	LD50 Mouse: 5640 mg/kg
Methanol	Oral ATE	LD50 Rat: 100 mg/kg
	Dermal ATE	LD50 Rabbit: 300 mg/kg
	Inhalation ATE	LC50 Rat: 3 mg/L (4 hr [vapor])
Polyethylene glycol mono(octylphenyl) ether	Oral ATE	LD50 Rat: 500 mg/kg

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met

Product data: No data available

Substance data: No data available

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met

Product data: No data available

Substance data:

Name	Result
Polyethylene glycol mono(octylphenyl) ether	Causes serious eye damage.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met

Product data: No data available

Substance data: No data available

Carcinogenicity:

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data: No data available

International Agency for Research on Cancer (IARC)

Name	Classification
Glycine	Not Applicable
Methanol	Not Applicable
Polyethylene glycol mono(octylphenyl) ether	Not Applicable

Germ Cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data: No data available

Reproductive Toxicity

Assessment: Suspected of damaging fertility or the unborn child.

Product data: No data available

Substance data: No data available

Specific target organ toxicity (single exposure)

Assessment: May cause damage to organs

Product data: No data available

Substance data:

Name	Result
Methanol	Causes damage to Optic nerve (nervus opticus), central nervous system.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data: No data available

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data: No data available

Information on likely routes of exposure:

No data available

Symptoms related to the physical, chemical, and toxicological characteristics:

No data available

Information on other hazards

Endocrine disrupting properties

Substance data: No data available

Other information: No data available

12. Ecological Information

12.1 Toxicity

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data:

Name	Result
Glycine	Fish LC50 Oryzias latipes: >1000 mg/L (96 hr)
	Aquatic Plants EC50 Freshwater algae: >1000 mg/L (72 hr [biomass])
	Aquatic Invertebrates EC50 Daphnia magna: >220 mg/L (48 hr [mobility])
Methanol	Fish LC50 Lepomis macrochirus: 15,400 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 18,260 mg/L (96 hr)
	Aquatic Plants EC50 Selenastrum capricornutum: 22,000 mg/L (96 hr [growth rate])
Polyethylene glycol mono(octylphenyl) ether	Fish LC50 Oncorhynchus mykiss: 7.2 mg/L (96 hr)

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data:

Name	Result
Methanol	Aquatic Invertebrates NOEC Daphnia magna: 122 mg/L (21 d [reproduction])

12.2 Persistence and degradability

Product data: No data available

Substance data:

Name	Result
Glycine	This substance is readily biodegradable. 67 - 82% degradation in water, measured by O2 consumption, after 14 days.
Methanol	The substance is readily biodegradable. 97% degradation after 20 days, measured by Oxygen consumption.

12.3 Bioaccumulation potential

Product data: No data available

Substance data:

Name	Result
Glycine	Bioaccumulation is not expected. BCF (aquatic species): 0.893 L/kg ww
Methanol	This substance does not significantly bioaccumulate in fish. Experimental BCFs of < 10 in fish species.

12.4 Mobility in soil

Product data: No data available

Substance data:

Name	Result
Glycine	The substance is highly mobile in soil with a very low potential for adsorption to soil and sediment. Log Koc = 0 at 25 °C
Methanol	The substance is highly mobile with a very low potential for adsorption to soil and sediment. Koc: 0.13 - 1 dimensionless

12.5 Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT

vPvB assessment: This product does not contain any sunsrtances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Glycine	This substance is not PBT.
Methanol	The substance is not PBT.

vPvB assessment:

Glycine	This substance is not vPvB.
Methanol	The substance is not vPvB.

12.6 Endocrine disrupting properties

Substance data: No data available

Other adverse effects: No data available

12.7 Hazard to the ozone layer

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available

Substance data: No data available

13. Disposal Considerations

13.1 Disposal methods

Disposal instructions Dilute with large volumes of water and dispose of into sewer system, in accordance with local regulations.

Waste from residues / unused products

Dispose in accordance with all applicable local and national regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other disposal recommendations:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

14. Transport Information

DOT Not regulated as a hazardous material by DOT.

DOR Not regulated as dangerous goods.

IATA Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

TDG Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is not hazardous according to OSHA 29CFR 1910.1200. This mixture is a component of an in vitro diagnostic device regulated by the U.S. Food and Drug Administration.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpart. D)

Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

CERCLA (Superfund) reportable quantity (lb.) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely Hazardous substance (40 CFR 355, Appendix A) Section 311/312 (40 CFR370)	No

No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)

Not controlled

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Non-controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

Mexico regulations This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. Other Information

Recommended restrictions Use in accordance with supplier's recommendations.

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 0
Flammability: 0
Instability: 0

Disclaimer

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