

Material Safety Data Sheet

Total protein Biuret Reagent

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Total protein Biuret Reagent

Catalog Numbers: 310 001, 310 002, 310 003, 310 004, 310 005

Use: Spectrum Diagnostics Total protein reagent is intended for the in- vitro quantitative, diagnostic determination of total protein in human serum or plasma on both automated and manual systems.

Contact Point

Egypt

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2. HAZARD IDENTIFICATION

Classified as hazardous according to the EU criteria

Hazard Classification: HAZARDOUS SUBSTANCE, NON DANGEROUS GOODS.

Hazard Category: Corrosive.

RISK PHRASES:

R34 Causes burns.

SAFETY PHRASES:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek Medical advice.

S45 In case of accident or if you feel unwell, seeks medical advice immediately.

Poison Schedule: (CH): 2

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
Reagent (R)		
Sodium hydroxide	750 mmol/L	1310-73-2
Copper sulfate	12.0 mmol/L	7758-99-8
Sodium potassium tartarate	40.9 mmol/L	6381-59-5
Potassium iodide	19.8 mmol/L	7681-11-0

All other ingredients determined not to be hazardous according to the EU criteria.

4. FIRST AID MEASURES

Swallowed: If swallowed, **DO NOT induce vomiting**. If victim is conscious give glass of water to drink. Immediately transport to hospital or doctor.

Eye: If product enters the eyes, immediately, flush with plenty of water for 15 minutes, ensuring eye lids are held open. Immediately transport to hospital or doctor.

Skin: If product contacts the skin, remove any contaminated clothing and wash skin thoroughly with soap and water. If irritation persists transport to hospital or doctor.

Inhaled: Remove victim to fresh air. Apply resuscitation if victim is not breathing.

First Aid Facilities: Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use extinguishing media suitable for surrounding fire situation.

Hazards from Combustion Products: Decomposes on heating emitting noxious smoke.

Precautions for Fire Fighters and Special Protective Equipment: If safe to do so, move undamaged containers from fire area. Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

Hazchem Code: None allocated.

Flammability: This material is not a combustible or flammable liquid.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:

Keep unnecessary people away; Isolate hazard area and deny entry. If product spills onto floors it will represent a slip hazard, walk cautiously. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS.

Methods and Materials for Containment and Clean Up Procedures:

Dike area using with an absorbent such as diatomaceous earth - to prevent run off into drains and waterways. Throw further absorbent (diatomaceous earth or other inert material) on top of spill. Use non sparking shovel and collect and seal in properly labeled containers for disposal. Remainder of material may be neutralized by cautiously adding vinegar.

Collect this material after foaming/effervescence ceases and place into above labeled container.

Warning: Products that contain alkali hydroxides must be kept away from non-ferrous metals, as extremely flammable hydrogen gas will be generated and if the appropriate flammability limits are reached and a source of ignition is present, a violent explosion will occur.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin and eyes.

Conditions for Safe Storage

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from strong acids, aluminum, zinc and magnesium. Store at 2-25°C and the reagent will be stable until the expiry date stated on the bottle and kit box labels, Only the standard is needed to be kept refrigerated at (2 - 8°C). Keep containers tightly closed, when not using the product, Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards have been assigned by (NOHSC) for this product

Engineering Controls

Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate unless the material is heated, reacted or otherwise changed in some type of chemical reaction, then the use of a local exhaust ventilation system is recommended.

Personal Protection Equipment

Gloves: Not normally required, however, if product has spilt, or package is broken, then the use of PVC or neoprene
Gloves are recommended.

Eyes: Chemical glasses or face shield to protect eyes.

Respiratory Protection: Avoid breathing of vapours. The use of a respirator is not normally required, however, if entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended. Select and use respirators in accordance with AS/NZS 1715/1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear blue liquid with no odour
Solubility in water	Completely miscible.

Other properties

PH: 13.5 ± 0.1

Volatile Organic Compounds: > 85%

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of use.

Conditions to Avoid: Incompatibles, especially reaction with zinc, aluminium or magnesium, which may release flammable hydrogen gas which could be ignited by heat, flames, ignition sources and lead to an explosion.

Incompatible Materials: Strong mineral acids (sulfuric, nitric and hydrochloric), aluminium, zinc and magnesium.

Hazardous Decomposition Products: Decomposes on heating emitting noxious smoke.

Hazardous Reactions: Will not occur.

11. TOXICOLOGICAL INFORMATION

There is no toxicological information available for this product, however, for the ingredient:

Sodium Hydroxide

According to OECD Guideline for the Testing of Chemicals (OECD 405) for eye corrosion and OECD Guideline for the Testing of Chemicals (OECD 404) for skin corrosion, both test procedures have been utilized to determine that sodium hydroxide is a confirmed corrosive substance. This product contains 750mmol/L of sodium hydroxide which is considered to be **CORROSIVE**, we anticipate that this product will cause burns to the eyes and skin.

Acute Health Effects

Swallowed: Will cause burns to the mouth, mucous membranes, throat, oesophagus and stomach. If sufficient quantities (approximately 150 ml) are ingested (swallowed) death may occur.

Eye: Will cause burns to the eyes with effects including: pain, tearing, conjunctivitis, corneal ulcerations and if duration of exposure is long enough, blindness will occur.

Skin: Will cause burns to the skin, with effects including; redness, blistering, localized pain and inflammation.

Inhaled: Will cause irritation to the nose, throat and respiratory system with effects including: dizziness, headache, coughing, and loss of co-ordination and chest pains.

Chronic: Prolonged or repeated skin contact will lead to necrosis (death) of the skin.

12. ECOLOGICAL INFORMATION

No information is available for this product, however, for sodium hydroxide component:

Water Pollution

Persistency: Can persist for extended periods of time.

Effect on water treatment process: Can raise pH and interfere with coagulation. Avoid contaminating drains, sewers or waterways.

13.DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Normally suitable for disposal by approved waste disposal agent.

14.TRANSPORT INFORMATION

UN Number: None allocated

Proper Shipping Name: None allocated

Dangerous Goods Class: None allocated

Subsidiary risk: None allocated

Packing Group: None allocated

Road and Rail Transport:

Not classified as a Dangerous Good according to the United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labeling of Chemicals.

Air Transport:

Not classified as a Dangerous Good according to the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Marine Transport:

Not classified as a Dangerous Good according to the International Maritime Organization Rules (Maritime Dangerous Goods Code - IMDG Code) for transport by sea.

15.OTHER INFORMATION

Principal References

Information supplied by manufacturer, reference sources including the public domain.

Disclaimer

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions which are available on request.

END OF MSDS