

# Material Safety Data Sheet

## Urea/BUN - LS (Modified Urease-Berthlot Method)

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Urea/BUN - LS (Modified Urease-Berthlot Method)

**Catalog Numbers:** 321 001, 321 002, 321 003, 321 004

**Use:** Spectrum Diagnostics colorimetric urea reagent is intended for the in-vitro quantitative, diagnostic determination of urea in human serum on both automated and manual systems.

#### **Contact Point**

##### Egypt

Egyptian Company for Biotechnology (S.A.E.)

Obour city Industrial area, block 20008

Piece 19 A. P.O Box 30 Obour City

Cairo, Egypt.

Phone: +2 02 4489 2248 Fax: +2 02 4489 2247

Email: [info@spectrum-diagnostics.com](mailto:info@spectrum-diagnostics.com)

Internet: [www.spectrum-diagnostics.com](http://www.spectrum-diagnostics.com)

### 2. HAZARD IDENTIFICATION

Classified as hazardous according to the EU criteria

**Hazard Classification:** HAZARDOUS SUBSTANCE, Non DANGEROUS GOODS.

**Hazard Category:** Irritant.

#### **RISK PHRASES:**

**R36/38** Irritating to eyes and skin.

#### **SAFETY PHRASES:**

**S26** in case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**S37/39** wears suitable gloves and eye/face protection.

**Poison Schedule:** Sodium Hydroxide (CH): 2  
Sodium Hypochlorite (CH): 3

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
Reagent 1 (R1)		
Phosphate buffer	100 mmol/L	7778-77-0
Sodium salicylate	80 mmol/L	54-21-7
Sodium nitroprusside	6.0 mmol/L	13755-38-9
EDTA	30.0 mmol/L	6381-92-6

<b>Reagent 2 (R2)</b>		
Urease	>350000 U/L	9002-13-5
<b>Reagent 3 (R3)</b>		
Sodium hydroxide	400 mmol/L	1310-73-2
Sodium hypochlorite	20.0 mmol/L	7681-52-9

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

#### 4.FIRST AID MEASURES

**Swallowed:** If swallowed, **DO NOT** induce vomiting. Give 3 to 4 glasses of water to drink. Seek immediate medical assistance.

**Eye:** If product enters the eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. If irritation develops or persists, 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:** Move 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 oxides of carbon and oxides of nitrogen.

**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 Cleanup 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, then shovel up and seal in properly labeled containers for disposal.

## 7.HANDLING AND STORAGE

### Precautions for Safe Handling

Provide adequate ventilation. Avoid generating vapours.

### 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 oxidizing agents. Keep containers closed, when not using the product. When stored at 2 - 8°C the reagent will be stable until the expiry date on the bottle and kit box labels. 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 or any of the components.

### Engineering Controls

Maintain adequate ventilation at all times. No other measures are required for this product.

### Personal Protection Equipment

**Gloves:** Not normally required, however, if handling large quantities the use of natural rubber is recommended.

**Eyes:** Chemical glasses or face shield for spills.

**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

	R1 Buffer	R2 Enzyme	R3 Alkaline reagent
Appearance	Clear liquid with no odour	Clear liquid with no odour	Clear liquid with no odour
Solubility in water	Completely miscible	Completely miscible	Completely miscible

### Other properties

pH	8.0 (± 0.1)
----	-------------

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal conditions of use.

**Conditions to Avoid:** Generation of vapours.

**Incompatible Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Decomposes on heating emitting oxides of carbon and oxides of nitrogen.

**Hazardous Reactions:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

There is no toxicological information available for this product

### ACUTE HEALTH EFFECTS

**Swallowed:**

Drinking large quantities of this product may cause irritation to mouth, throat and stomach, which may lead to nausea, vomiting and diarrhea.

**Eye:**

May cause mild irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision. These effects are anticipated to be of a short acting nature and no long term injury is envisaged.

**Skin:**

May cause mild irritation to the skin.

**Inhaled:**

If the product is heated, the vapours generated may cause irritation to the mouth, throat and upper respiratory system.

**Chronic:**

Prolonged or repeated skin exposure may cause skin rashes in some susceptible individuals.

## 12. ECOLOGICAL INFORMATION

No ecological information available for this product. Do not dispose of large quantities to waterways, drains or sewers.

## 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**