**Coral Clinical Systems**
**A Division of Tulip Diagnostics (P) Ltd.**
**Verna, Goa – 403 722, INDIA**

# Safety Data Sheet

## 1. INFORMATION ON THE SUBSTANCE / PREPARATION AND COMPANY

**1.1 Product Name** : **Total Protein Kit ( Biuret method)**

| Kit | Catalog No. | Components |
|---|---|---|
| **Total Protein Kit ( Biuret method)** | 1101201150/ 1101202150/ 1101203150/ 1101201000/1101200010/1105130090/ 1105130270/1106220320/1106220080/ 1106220040/1116250250/1116250450/ 1116250220/1120170320/1123170090 | L1: Buiret Reagent S:Total Protein Standard |

**1.2 Intended Use** : For the determination of Total Proteins in serum and plasma.

**1.3 Company** : **Coral Clinical Systems**

(A Division of Tulip Diagnostics (Pvt) Ltd.)
Plot No. M-46 & M-47, Building E,
Phase III B, Verna Industrial Estate,
Verna-Goa, 403722
Tel :- +91-832-6680121
Fax :- +91-832-2887028
E-mail :- coral@tulip group.com

**1.4 In emergencies** :Call your local emergency center.

## 2. Composition / Information on Hazardous Ingredients

| Chemical Name | CAS # | % W/V | Exposure Limits in Air | | | | |
|---|---|---|---|---|---|---|---|
| | | | ACGIH | | OSHA | | OTHER |
| | | | TLV | STEL | PEL | STEL | |
| **Reagent 1: Biuret Reagent** | | | | | | | |
| Sodium Hydroxide | 1310-73-2 | 0.8% | C 2 mg/m$^3$ | NA | C 2 mg/m$^3$ | N / A | N / A |
| **Reagent 2: Standard** | | | | | | | |
| NA | NA | NA | NA | NA | NA | NA | NA |

## 3.Hazard Identification

According to 1999/45/EC, the preparation is classified as hazardous substance or mixture.
Skin Irritation,category 2; H315
Eye Irritation,Category 2;H319

**Other Information**

The reagents contain materials from animal origin i.e BSA (Bovine). The BSA used is derived from non -BSE country. The concerned certificate is available .

## 4.First Aid Measures

**Inhalation:**
If breathing becomes difficult, remove victim to fresh air. Seek medical attention immediately.

**Ingestion:**
Get medical attention if there has been ingestion of this product.

**Skin Contact:**
Avoid skin contact. If skin contact occurs, remove contaminated clothing and wash exposed skin with water for atleast 15 minutes. Get medical attention immediately.

**Eye Contact:**
Immediately flush eye(s) with large volume of water for atleast 15 minutes, occasionally lifting the lower lids. Get medical attention immediately.

## 5.Fire Fighting Measures

**Flash Point (Method used):** NA **Flammable Limits – LEL:** NA **UEL:** NA

**Extinguishing Media:**
Use fire extinguishing media appropriate for site conditions.

**Special Fire Procedures:**
Structural firefighting gear and self-contained breathing apparatus will provide adequate protection if this product is in a fire area.

**Unusual Fire and Explosion Hazards:**
Sodium azide can react with copper, lead, brass, or solder in plumbing to form explosive compound of lead azide and copper azide. Sodium azide can react with acids to form explosive hydrogen azide.

## 6.Accidental Release Measures

**Steps to be taken in case material is Released or Spilled:**
PPE should be level D: lab gloves, chemical resistant apron, boots and splash goggles. Use an absorbent material to contain / pick up the spilled solution. Place all spill residue into a suitable container, seal, label and hold for disposal.

## 7.Handling and Storage

Refer to packet insert for additional information on handling and storage procedures.

## 8.Exposure Controls and Personal Protection

**Ventilation Data:**
A system of local and / or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

**Respiratory Protection:**
Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow OSHA respirator regulations (29CFR1910.134) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide worker protection for given working conditions, level of airborne concentration, and presence of sufficient oxygen.

**Protective Gloves:**
Wear appropriate protective gloves to prevent skin contact.

**Other Protective Equipment:**
Wear appropriate eye protection to prevent eye contact. Wear appropriate body protection to prevent skin contact.

**Other Engineering Controls:**
Eye wash stations and deluge showers.

### Work Practices:
Good laboratory technique should be used when handling this product. Observe appropriate chemical hygiene. Avoid contact with eyes or skin. Do not place in mouth.

### Hygienic Practices:
Do not eat, drink, or smoke while working with product. Upon completion of work activities involving this product, wash hands thoroughly with soap and water.

## 9.Physical And Chemical Properties

### L1: Buiret Reagent

| | | | | | |
|---|---|---|---|---|---|
| Relative Vapour density(air = 1) | : | NA | Evaporation rate( nBuAc = 1): | | NA |
| Specific Gravity (water = 1) | : | NA | Freezing / Melting Point | : | NA |
| Solubility in Water | : | Soluble | Boiling Point | : | NA |
| Vapour Pressure, mm Hg @ $20^0$C: | | NA | pH | : | NA |

### S:Total Protein Standard

| | | | | | |
|---|---|---|---|---|---|
| Relative Vapour density(air = 1) | : | NA | Evaporation rate( nBuAc = 1): | | NA |
| Specific Gravity (water = 1) | : | NA | Freezing / Melting Point | : | NA |
| Solubility in Water | : | Soluble | Boiling Point | : | NA |
| Vapour Pressure, mm Hg @ $20^0$C: | | NA | pH | : | NA |

### Odour and Appearance Information
**Reagent 1:** Clear, Bluish solution

**Reagent 2:** Clear, colourless solution

## 10.Stability and Reactivity

### Incompatibility ( Materials to Avoid):
Strong bases, strong acids, and water reactive materials.

### Hazardous Decomposition Products:
Thermal decomposition may produce carbon monoxide and carbon dioxide.

### Will Hazardous Polymerization Occur?
Hazardous polymerization will not occur.

### Conditions to Avoid / Polymerization:

### Is the Product Stable?
Yes, under normal handling and storage conditions.

### Conditions to Avoid/stability
Stable Solution. Avoid acidification of solution, which may generate hydrogen cyanide gas.

## 11.Toxicological Information

**Toxicity Data:**
Sodium Azide (Undiluted): LD50 (rat and mouse, oral)=27mg/kg; LD50 (rabbit, skin)=20mg/kg.

**Reproductive effects:**
NA.

**Target organ Effects:**
Eyes (redness), Skin (redness), central nervous systems (nausea/vomiting), cardiovascular systems (fall in blood pressure, change in heart rate), digestive (nausea/vomiting, diarrhea).

**Carcinogenicity:** No

| CHEMICAL NAME | CAS # | % W/V | NTP Carcinogen | | IARC | OSHA |
|---|---|---|---|---|---|---|
| | | | Known | Anticipated | | |
| NA. | | | | | | |

## 12.Ecological Information

**Environmental Fate / Stability**:NA

**Effect of Material on plants or animals**:NA

**Effect of Chemical on Aquatic Life**:NA

## 13.Disposal Considerations

**EPA Waste Number and Proper Waste Disposal Method:**
Please consult local, state and federal regulations for additional guidance on disposal.

## 14.Transportation Information

**Is this Material Hazardous?** Not regulated under transportation regulations.

| | | |
|---|---|---|
| Proper Shipping Name : NA | | |
| Hazard Class Number : NA | Packing Group: NA | UN Number: NA |

## 15.Regulatory Information NA.

## 16.Other Information

Hazard Statement and Precautionary statements referred elsewhere in the safety data sheet:
H315 - Causes skin irritation.
H319-Causes serious eye irritation.

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. It remains the user's own responsibility to make sure that the information is appropriate and complete for his specific use of this product. The user is also responsible for observing any laws and applicable guidelines.

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