

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION

#### 1.1. Identification of the product

Product name: **CARCINOEMBRYONIC ANTIGEN (CEA) ENZYME IMMUNOASSAY TEST KIT**

**Enzyme Linked Immunosorbent Assay for the Quantitative Determination of Carcinoembryonic Antigen (CEA) in Human Serum.**

Product classification: In-vitro diagnostics

#### 1.2. Manufacturer identification

Company Name: ORCHID BIOMEDICAL SYSTEMS [P] Ltd.  
Address: Plot Nos. M 46/47, Phase III-B, Verna Industrial Estate,  
Verna, Goa, 403 722, India  
Phone: 91 832 6682000  
E-mail: [sales@orchidbiomedical.com](mailto:sales@orchidbiomedical.com)

### 2. HAZARDS IDENTIFICATION

#### 2.1. Potential biohazard:

The standards and controls are formulated with a buffer base, animal serum, and human serum. The human serums are tested by a licensed method and found to be non-reactive for HIV-1, HIV-2, Hepatitis B surface antigen and HCV. Because no test method can offer absolute assurance that these agents are absent, reagents should be handled at the Biosafety Level 2, as recommended for any potentially infectious human blood product

#### 2.2. Chemical hazard:

The TMB Chromogenic Substrate containing TMB, is formulated with DMSO, an irritant and mucous membranes. In case of contact with any of these reagents, wash thoroughly with water. TMB is a suspected carcinogen.

Stop Solution is an acidic and corrosive agent. Avoid contact with skin.

### 3. COMPOSITION OF THE KIT

Coated Microwells: Microwells coated with monoclonal anti-CEA antibody.  
CEA Enzyme Conjugate  
CEA Standard set of 6 standards labeled as A to F in liquid form.  
Wash Buffer Concentrate (20X)  
TMB Substrate  
Stop Solution  
Control Set  
Pack Insert  
Plate Sealers  
Protocol Sheet  
Microwell Holder

### 4. FIRST-AID MEASURES

**4.1. Skin contact:** Remove contaminated clothing and wash the exposed skin area thoroughly with soap and water.

- 4.2. Eye contact:** Flush with copious amounts of water for at least 15 minutes. Seek medical attention.
- 4.3. Inhalation:** Remove to fresh air, give oxygen if breathing becomes difficult and seek medical attention.
- 4.4. Ingestion:** Flush mouth with copious amounts of water, provided that the person is conscious and seek medical attention.

## 5. FIRE-FIGHTING MEASURES

- 5.1. Suitable extinguishing media:** Chemical or water fire extinguisher.
- 5.2. Extinguishing media not to be used:** None known.
- 5.3. Special fire-fighting procedures:** None known.
- 5.4. Unusual fire and explosion hazards:** Not available
- 5.5. NFPA rating:** Health: 2, Flammability: 0, Reactivity: 1

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1. Body precautions:** Wear rubber gloves, impermeable shoe covers and long laboratory coat.
- 6.2. Environmental precautions:** Contain the spill to the smallest area possible.
- 6.3. Cleaning measures:** Take care not to contaminate body. Absorb the material with disposable towels. Soak area with a 2% Sodium Hypochlorite solution and wipe up with disposable towels. Dispose of all contaminated trash in accordance with local regulations.

## 7. HANDLING AND STORAGE

- 7.1. Handling:** Wear suitable personal protective equipment. Take care not to splash spill or splatter reagents. Do not eat, drink, smoke or apply cosmetics in laboratory areas. Do not pipette samples or reagents by mouth.
- 7.2. Storage:** Store the test kits in 2 - 8° C refrigerators designated and labeled to contain human blood products.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1. Body protection:** Wear long laboratory coat.
- 8.2. Respiratory protection:** In case of fire, wear self-contained breathing apparatus.
- 8.3. Hand protection:** Wear non-permeable rubber, neoprene, latex or nitrile disposable gloves. Change gloves when they become contaminated.
- 8.4. Eye protection:** Wear safety glasses or goggles when a splash hazard exists.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1. Physical state (at 20°C):** Microtiter plate is in solid form. All other reagents are in liquid form.
- 9.2. Odor:** Odorless
- 9.3. pH value:** All reagents 6.8 ~ 8.0
- 9.4. Melting point/freezing Point:** Not determined
- 9.5. Boiling point:** Not determined
- 9.6. Evaporation rate:** Not determined
- 9.7. Flammability (solid, gas):** Not flammable
- 9.8. Upper/lower flammability or explosive limits:** Not applicable
- 9.9. Vapor pressure:** Not determined
- 9.10. Vapor density:** Not determined

MSDS CARCINOEMBRYONIC ANTIGEN (CEA) ENZYME IMMUNOASSAY TEST KIT, Page 2 of 4



- 9.11. **Relative density:** Not determined
- 9.12. **Solubility:** Water soluble
- 9.13. **Auto-ignition temperature:** Not applicable
- 9.14. **Decomposition temperature:** Not determined
- 9.15. **Viscosity:** Not determined
- 9.16. **Explosive properties:** None
- 9.17. **Oxidizing properties:** Not determined

## 10. STABILITY AND REACTIVITY

### 10.1. Stability

Stable under recommended storage conditions.

### 10.2. Reactivity

No known reactivity hazards associated with product.

### 10.3. Possibility of hazardous reactions

No hazardous polymerization

### 10.4. Conditions to avoid

Excessive heat and light

### 10.5. Incompatible materials

Acids

## 11. TOXICOLOGICAL INFORMATION

11.1. **Acute toxicity:** Not determined

11.2. **Skin corrosion/irritation:** Stop Solution is an acidic and corrosive agent, and may cause skin irritation with direct contact.

11.3. **Serious eye damage/irritation:** Not determined

11.4. **Respiratory or skin sensitization:** Not determined

11.5. **Germ cell mutagenicity:** Not determined

11.6. **Carcinogenicity:** None known

11.7. **Reproductive toxicity:** Not determined

11.8. **STOT-single exposure:** Not determined

11.9. **STOT-repeated exposure:** Not determined

11.10. **Aspiration hazard:** Not determined

12. **ECOLOGICAL INFORMATION** None known.

## 13. DISPOSAL CONSIDERATIONS

13.1. **Disposal of reagents:** Dispose according to current regional and national regulations.

13.2. **Contaminated containers:** Dispose following current regional and national regulations.

## 14. TRANSPORT INFORMATION

14.1. **UN number:** Not available

14.2. **UN proper shipping name:** Not available

14.3. **Transport hazard class(es):** Not available

14.4. **Packing group:** Not available

14.5. **Environmental hazards:**

Overland transport (ADR/RID): None

Water transport (ADN/IMDG): None

Air transport (ICAO/IATA): None

14.6. Special precautions for user: None

## 15. REGULATORY INFORMATION

15.1. **Classification:** This preparation is classified and labeled in accordance with applicable national and international regulations.

15.2. **Symbols of danger:** N/A

15.3. **"R" phrases indicating specific risks:** Irritant R36/37/38, Irritating to the eyes, respiratory system and skin.

15.4. **"S" phrases indicating caution:** S26, In case of contact with any reagents rinse with copious amounts of water for at least 15 minutes. If irritation persists, seek medical attention. S36, Wear suitable protective clothing.

## 16. OTHER INFORMATION

**Recommended Use:** For In Vitro Diagnostic Use only.

Not for use on or in human and animals. Information contained in this MSDS relies upon our best knowledge of the product upon issue of this document to describe the use, storage, transport and disposal under safe and secure measures. Such information is not a guarantee of the characteristics and specific quality of the product. This MSDS concerns the stated preparation and cannot apply to the product if used with other materials or in a process other than those specifically stated.

MSDS established : February 2025

Revision number : 00

