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	<b>VACUETTE® Homocysteine Detection Tube</b>	

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** VACUETTE® Homocysteine Detection Tube
- **Manufacturer/Supplier:**

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS



- **Description:** VACUETTE PET Tube (Polyethyleneterephthalate) and Inner PP Tube with
- **Chemical name:** Citric Acid Monohydrate  
Citric Acid Trisodium Dihydrate
- **CAS No.** Citric Acid Monohydrate 5949-29-1  
Citric Acid Trisodium Dihydrate 6132-04-03
- **Quantity of substances:** < 10 %
- **Exposure limits:** N/A

## SECTION 3: HAZARDS IDENTIFICATION

- **Hazard description:**  
May cause eye irritation.
- **Acute exposure effect:**  
May cause eye irritation.

## SECTION 4: FIRST AID MEASURES

- **Skin:** Wash with soap and copious amounts of water.
- **Eyes:** Flush eyes with copious amounts of water for at least 15 minutes. Get medical attention.
- **Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.
- **Ingestion:** Wash out mouth with water provided person is conscious. Call a physician.

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## SECTION 5: FIRE-FIGHTING MEASURES

- **Suitable extinguishing media:** Water spray, carbon dioxide, dry chemical powder or appropriate foam.
- **Unusual fire and explosion hazards:** Emits toxic fumes under fire conditions. This material, like most materials in powder form, is capable of creating a dust explosion.
- **Protective equipment:** Firefighters should wear proper protective clothing to prevent contact with skin and eyes and self-contained NIOSH approved breathing apparatus operated in positive pressure mode.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Avoid overexposure. Wear protective equipment, including NIOSH approved respirator.
- **Environmental precautions:** N/A
- **Methods for cleaning up:** Do not dry-sweep. Wet down to minimize airborne dust. Place in an appropriate disposal container. Flush area with water.

## SECTION 7: HANDLING AND STORAGE



- **Handling:**  
**Advice for safe handling:** Do not breathe dust. Avoid dust generation or accumulation. Use adequate ventilation and dust collection.  
**Information about protection against explosions and fires:** N/A
- **Storage:**  
**Requirements to be met by storerooms and receptacles:** Use suitable containers. Keep tightly closed when not in use. Store in a cool, dry, well-ventilated area.  
**Information about storage in one common storage facility:** Store away from incompatible materials, such as strong bases and strong oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Additional information about design of technical systems:** Use sufficient local or general exhaust.
- **Personal protective equipment:**  
**General protective and hygienic measures:** Wash thoroughly after handling. Remove contaminated and wash before reuse. Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation. Use with adequate ventilation. Provide eye bath and safety shower.  
**Breathing equipment:** NIOSH-approved respirator  
**Hand protection:** Wear appropriate protective gloves to prevent skin exposure.  
**Eye protection:** Use chemical safety goggles  
**Body protection:** Wear appropriate protective clothing to prevent skin exposure.
- **Hygiene measures:** N/A

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **General information**  
**Form:** Solid  
**Color:** White  
**Odor:** Odorless
- **PH-value:** Citric Acid Monohydrate: 1,85 (5%, 25°C)  
 Citric Acid Trisodium Dihydrate: 7,5 – 9,0
- **Change in condition**  
**Melting point/Melting range:** Citric Acid Monohydrate: 135 – 152 °C  
 Citric Acid Trisodium Dihydrate: 300 °C  
**Boiling point/Boiling range:** not determined
- **Flash point:** Citric Acid Monohydrate: 345 °C  
 Citric Acid Trisodium Dihydrate: N/A

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- **Flammability (solid, gaseous):** N/A
- **Danger of explosion:** Product does not present an explosion hazard
- **Vapor pressure:** Not determined
- **Density:** Citric Acid Monohydrate: 1,4 g/cm<sup>3</sup>  
Citric Acid Trisodium Dihydrate: N/A
- **Solubility in/Miscibility w/H<sub>2</sub>O:** Soluble
- **Organic solvents:** N/A
- **Solids content:** N/A

#### SECTION 10: STABILITY AND REACTIVITY

- **Thermal decomposition / conditions to avoid:** None identified
- **Materials to avoid:** Strong bases, strong oxidizing agents and reducing agents.
- **Dangerous reactions:** Stable, none known
- **Hazardous decomposition products:** none identified

#### SECTION 11: TOXICOLOGICAL INFORMATION

- **Acute toxicity** (LD 50 oral rat > 200 mg/kg)  
**Eye:** May cause irritation  
**Skin:** May cause irritation  
**Inhalation:** Inhalation of large amounts of dust may be irritating to the upper respiratory tract.  
**Ingestion:** May cause nausea and vomiting if ingested in large quantities. May also cause hypernoia and convulsing.  
**Primary irritant effect:**  
**On the skin:** Not established  
**On the eye:** Not established
- **Sensitization:** Not established
- **Additional toxicological information:** None identified

#### SECTION 12: ECOLOGICAL INFORMATION



- **Ecotoxicological effects:** No data is available on the adverse effects of this material on the environment.
- **Other information:** N/A
- **General notes:** N/A

#### SECTION 13: DISPOSAL CONSIDERATION

- **Product:**  
**Recommendation**  
 Disposal should be done in accordance with all federal, state and local environmental regulations. Disposal must be made according to the regulations found in 40 CFR 261. This product is not a hazardous waste according to local regulations.
- **Packaging:**  
**Recommendation**  
 Disposal should be done in accordance with all federal, state and local environmental regulations. This product is not a hazardous waste according to local regulations.  
**Recommended cleansing agent:** Water if necessary with cleansing agents

#### SECTION 14: TRANSPORT INFORMATION

- **DOT regulations:** Not regulated
- **Land transport ADR/RID:** Not regulated
- **Maritime transport IMDG:** Not regulated
- **Air transport ICAO-TI and IATA-DGR:** Not regulated

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#### SECTION 15: REGULATORY INFORMATION

- **Hazard Communication Standard (HCS) 29 CFR 1910.1200(g), revised in 2012**
- **EC guidelines: 91/155/EED, 93/112, 88/379/EC**
- **National regulations: Chemical (Hazard Information and Packaging) Regulations: ChemG (Austria)**
- **Water hazard class: N/A**
- **Note:** Please note that there may be additional legal provisions to be observed. We recommend that you keep yourself informed about all applicable international, national and local regulations.

#### SECTION 16: OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate. However, neither Greiner Bio-One nor any of its subcontractors or suppliers assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.