



Product Name: BD Vacutainer® Brand Tube with ACD Solution A or B

1 Identification of substance:

- **Product Details:**

MSDS Number: VS60316-03

Issue Date: January 24, 2005

Supersedes: VS60316-02

ECO No.: ECO24505

- **Product Name:** BD Vacutainer® Brand Tube with ACD Solution A or B

- **Catalog Numbers:** 364012, 364606, 364816, 367756, 368030 Discontinued: 361014, 364001, 364003, 364011

- **Manufacturer/Supplier:**

BD Diagnostics, Preanalytical Systems

1 Becton Drive

Franklin Lakes, NJ, 07417-1885

- **Information Department:**

BD Diagnostics, Preanalytical Systems Technical Service, (800) 631-0174

- **Emergency Information:**

In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostics, Preanalytical Systems, at (308) 423-0300, or ChemTrec at (800) 424-9300.

2 Composition/Data on components:

- **Description:**

Chemical name: Sodium citrate, Dextrose, and Citric acid monohydrate

Synonyms: Sodium citrate: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, trisodium salt; Lithium citrate hydrate; Trisodium citrate

Dextrose: Syrups, hydrolyzed starch, dehydrated

Citric acid monohydrate: Citric acid hydrate; 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monohydrate

- **CAS No.:** Sodium citrate: 68-04-2

Dextrose: 68131-37-3

Citric acid monohydrate: 5949-29-1

- **Quantity of substances:** Sodium citrate: 1.6 – 11.2 mg (0.4 – 0.75%)

Dextrose: 1.1 – 6.6 mg (0.3 – 0.4%)

Citric acid monohydrate: 0.4 – 2.5 mg (0.1 – 0.17%)

- **Exposure limits:** Not established

3 Hazards identification:


- **Hazard description:**


EU: This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by European Directive 91/155/EEC, and 93/112/EC.

U.S.: May cause eye and skin irritation. Inhalation of large amounts of dust may be irritating to the respiratory tract. May cause nausea and vomiting if ingested in large quantities. May also cause hypernoia and convulsing.

Primary route of entry: skin, eyes, inhalation and ingestion

Product Name: BD Vacutainer® Brand Tube with ACD Solution A or B

- **Classification system:** The classification is according to the latest editions of the EU- list, and extended by company and literature data.
- **Acute Exposure Effects:**
Eyes: May cause eye irritation.
Skin: May cause skin 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..
- **Repeated Exposure Effects:**
Eyes: None identified.
Skin: None identified.
Inhalation: None identified.
Ingestion: None identified.
- **Medical Conditions Which Might be Aggravated:** None identified.
- **NFPA ratings (scale 0-4):**

Health = 1
Fire = 0
Reactivity = 0
Specific Hazard = 0

- **HMIS ratings (scale 0-4):**

Health = 1
Flammability = 0
Reactivity = 0
Special = 0

4 First aid measures:

General information: No special measures required

After inhalation: Remove victim to fresh air. Seek immediate medical attention if breathing is difficult.

After skin contact: Wash affected area thoroughly with soap and water. Seek medical attention if irritation develops.

After eye contact: Rinse opened eye for 15 minutes under running water. Seek medical attention if irritation develops.

After Swallowing: Give 2 to 4 glasses of water to dilute. Seek immediate medical attention.

Information for doctor: Show this label

5 Fire fighting measures:

- **Suitable extinguishing agents:** Water spray, dry chemical, carbon dioxide, or alcohol foam.
- **Protective equipment:** Wear self-contained NIOSH approved breathing apparatus operated in positive pressure mode, and full protective clothing to prevent contact with skin and eyes. Keep containers cool by spraying with water.



Product Name: BD Vacutainer® Brand Tube with ACD Solution A or B

6 Accidental release measures:

- **Person-related safety precautions:** Avoid overexposure. Wear protective equipment, including NIOSH approved respirator.
- **Measures for environmental protection:** Not applicable
- **Measures for cleaning/collecting:** Do not dry-sweep. Wet down to minimize airborne dust. Place in an appropriate disposal container. Flush area with water.
- **Additional information:** None

7 Handling and storage:

- **Handling:**
Information 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: Not applicable.
- **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.
Further information about storage conditions: None

8 Exposure controls and personal protection:

- **Additional information about design of technical systems:** Use sufficient local or general exhaust.
- **Components with limit values that require monitoring at the workplace:**
Exposure limits: None established
- **Additional information:** Not applicable
- **Personal Protective Equipment:**
General protective hygiene measures: Wash thoroughly after handling. Remove contaminated clothing 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
Protection of hands: Wear appropriate protective gloves to prevent skin exposure.
Eye protection: Use chemical safety goggles
Body protection: Wear appropriate protective clothing to prevent skin exposure.

09 Physical and chemical properties:

- **General Information:**
Form: Powder



Material Safety Data Sheet
acc. to ISO/DIS 11014

Page 4 of 6

Printing Date: 2005-Jan-28

Printing Date: Reviewed on

Product Name: BD Vacutainer® Brand Tube with ACD Solution A or B

Color: Colorless

Odor: Odorless

• **Change in condition:**

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

• **Flash point:** Not applicable

• **Flammability (solid, gaseous):** Not applicable

• **Danger of explosion:** Under proper handling conditions, product does not present an explosion hazard.

• **Vapor pressure:** Not applicable

• **Density:** Not determined

• **Solubility in/Miscibility w/H₂O:** Not determined

• **pH-value:** Not applicable

Organic solvents: Not applicable

• **Solids content:** Not available

10 Stability and reactivity:

• **Thermal decomposition / conditions to be avoided:** None identified

• **Materials to be avoided:** Strong bases and strong oxidizing agents

• **Dangerous reactions:** Stable; none known

• **Dangerous products of decomposition:** Oxides of carbon. Acid smoke and fumes will be emitted when heated.

11 Toxicological information:

• **Acute toxicity:**

Eye: May cause eye irritation.

Skin: May cause skin 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:**

Chronic: Not established

Carcinogenicity: Does not contain more than 0.1% by weight of a material listed as a potential carcinogen by NTP, IARC, or OSHA.



Product Name: BD Vacutainer® Brand Tube with ACD Solution A or B

12 Ecological information:

- **Ecotoxicological effects:** No data is available on the adverse effects of this material on the environment. Neither COD nor BOD data are available.
- **Other information:** Not applicable
- **General notes:** Not applicable

13 Disposal considerations:

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

14 Transport information:

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

15 Regulations:

- **SARA Section 355 (extremely hazardous substances):** Substances not listed
- **SARA Section 302 (extremely hazardous substances):** Substances not listed
- **SARA Section 304 (Reportable Quantity (RQ) under CERCLA):** None
- **Section 313 (specific toxic chemical listings):** Substances not listed
- **TSCA (Toxic Substances Control Act) Inventory:** Substances listed
- **California Proposition 65 – Chemicals Known to Cause Cancer:** Substances not listed
California Proposition 65 – Chemicals Known to Cause Reproductive Toxicity: Substances not listed
- **SARA Section 311/312 (Hazard notification categories under SARA Title III):** None
- **Hazardous chemical(s) under OSHA Hazard Communication Standard (29 CFR 1910.1200):** None



Material Safety Data Sheet
acc. to ISO/DIS 11014

Page 6 of 6

Printing Date: 2005-Jan-28

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- **Carcinogenicity categories**
 - IARC (International Agency for Research on Cancer): Substances not listed*
 - NTP (National Toxicology Program): Substance not listed*
 - TLV (Threshold Limit Value established by ACGIH): Substances not listed*
 - MAK (German Maximum Workplace Concentration): Substances not listed*
- **Product related hazard information:** None
- **National regulations:** Not applicable
- **Water hazard class:** Not applicable

16 Other information:

To the best of our knowledge, the information contained herein is accurate. However, neither BD or any of its subsidiaries assumes any liabilities 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.

- **Department issuing MSDS:** Regulatory Affairs