



# Safety Data Sheet

acc. to OSHA HCS

Date Prepared: 03/14/2014

Reviewed On: 03/14/2014

## 1 Identification

- **Product Identifier**
- **Product Name: BD CytoRich™ Red Preservative**
- **Catalog Number: 490508**
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** In-vitro Diagnostics
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
BD Diagnostics - TriPath  
780 Plantation Drive  
Burlington, NC 27215  
Telephone: (336) 290 - 8300 or 866 - TriPath (option#1)
- **Information Department:** Technical Service
- **Emergency telephone number:**  
(336) 290-8300 or (866) TriPath (option # 1), or ChemTrec at (800) 424-9300.

## 2 Hazard(s) identification

- **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 3 H226      Flammable liquid and vapour.

GHS08 Health hazard

STOT SE 1 H370-H336 Causes damage to organs. May cause drowsiness or dizziness.

GHS07

Eye Irrit. 2A H319      Causes serious eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

T; Toxic

R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Xn; Harmful

R20/21/22-40: Harmful by inhalation, in contact with skin and if swallowed. Limited evidence of a carcinogenic effect.

Xi; Irritant

R36-43: Irritating to eyes. May cause sensitization by skin contact.

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R10: Flammable.

· **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

methanol

· **Hazard statements**

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H370-H336 Causes damage to organs. May cause drowsiness or dizziness.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

P405 Store locked up.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **NFPA ratings (scale 0-4)**



· **HMIS ratings (scale 0-4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixture**
- **Description:** Mixture consisting of the following components.

· **Dangerous Components:**

|                                    |                 |                                |       |
|------------------------------------|-----------------|--------------------------------|-------|
| CAS: 67-63-0<br>EINECS: 200-661-7  | isopropanol     | Xi R36; F R11<br>R67           | 23.3% |
| CAS: 67-56-1<br>EINECS: 200-659-6  | methanol        | T R23/24/25-39/23/24/25; F R11 | 10.0% |
| CAS: 107-21-1<br>EINECS: 203-473-3 | ethylene glycol | Xn R22                         | 6.7%  |

- **Additional information** Risk phrases refer to section 15.

**4 First-aid measures**

- **Description of first aid measures**
- **General information**  
Immediately remove contaminated clothing.  
Symptoms of poisoning may even occur after several hours; therefore provide medical observation for at least 48 hours after the accident.
- **After inhalation**  
Supply fresh air and seek medical advice.  
In case of unconsciousness place patient on side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** Seek medical treatment.
- **Information for doctor** Show this product label or this MSDS.

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- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire toxic gases may be produced.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Keep away from ignition sources  
Use respiratory protective device.  
Wear protective clothing.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** 15 - 30 °C
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.
- **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:**  
No further data; see Section 7.

### · Control parameters

- **Components with limit values that require monitoring at the workplace:**

|                                 |  |
|---------------------------------|--|
| <b>67-63-0 isopropanol</b>      |  |
| PEL                             | 980 mg/m <sup>3</sup> , 400 ppm  |
| REL                             | Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm<br>Long-term value: 980 mg/m <sup>3</sup> , 400 ppm             |
| TLV                             | Short-term value: 984 mg/m <sup>3</sup> , 400 ppm<br>Long-term value: 492 mg/m <sup>3</sup> , 200 ppm<br>BEI       |
| <b>67-56-1 methanol</b>         |  |
| PEL                             | 260 mg/m <sup>3</sup> , 200 ppm  |
| REL                             | Short-term value: 325 mg/m <sup>3</sup> , 250 ppm<br>Long-term value: 260 mg/m <sup>3</sup> , 200 ppm<br>Skin      |
| TLV                             | Short-term value: 328 mg/m <sup>3</sup> , 250 ppm<br>Long-term value: 262 mg/m <sup>3</sup> , 200 ppm<br>Skin; BEI |
| <b>107-21-1 ethylene glycol</b> |  |
| TLV                             | Short-term value: C 100 mg/m <sup>3</sup><br>H   |
| <b>50-00-0 formaldehyde</b>     |  |
| PEL                             | Short-term value: 2 ppm<br>Long-term value: 0.75 ppm<br>see 29 CFR 1910.1048                                       |
| REL                             | Short-term value: C 0.1* ppm<br>Long-term value: 0.016 ppm<br>*15-min  |

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|     |   |
|-----|---|
| TLV | Short-term value: C 0.37 mg/m <sup>3</sup> , C 0.3 ppm<br>SEN |
|-----|---|

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal Protective Equipment**
- **General protective and hygienic measures**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:**  
 In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.
- **Protection of hands:**

Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing (lab coat).

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

|               |           |
|---------------|-----------|
| <b>Form:</b>  | Liquid    |
| <b>Color:</b> | Clear     |
|               | Light red |
- **Odor:** Characteristic
- **pH-value:** 7.5
- **Change in condition**

|                                     |                |
|-------------------------------------|----------------|
| <b>Melting point/Melting range:</b> | Not determined |
| <b>Boiling point/Boiling range:</b> | 82 °C (180 °F) |
- **Flash point:** 25 °C (77 °F)
- **Ignition temperature:** 410.0 °C (770 °F)
- **Auto igniting:** Product is not self igniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**

|               |           |
|---------------|-----------|
| <b>Lower:</b> | 2.0 Vol % |
|---------------|-----------|

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|  |  |
|--|--|
| <b>Upper:</b>                                    | 44.0 Vol %                                 |
| · <b>Vapor pressure at 20 °C (68 °F):</b>        | 128.0 hPa (96 mm Hg)                       |
| · <b>Density:</b>                                | Not determined                             |
| · <b>Solubility in / Miscibility with Water:</b> | Soluble                                    |
| · <b>Solvent content:</b>                        |  |
| <b>Organic solvents:</b>                         | 33.8 %                                     |
| · <b>Other information</b>                       | No further relevant information available. |

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Incompatible material: strong oxidizers.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**67-56-1 methanol**

Oral LD50 5628 mg/kg (rat)

**50-00-0 formaldehyde**

Oral LD50 42 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:** Target organ: liver
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

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· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

|         |              |   |
|---------|--------------|---|
| 67-63-0 | isopropanol  | 3 |
| 50-00-0 | formaldehyde | 1 |

· **NTP (National Toxicology Program)**

|         |              |   |
|---------|--------------|---|
| 50-00-0 | formaldehyde | R |
|---------|--------------|---|

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** This material is not expected to be toxic to aquatic life.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

RCRA hazardous waste - RCRA # D001 (ignitable).

Must not be disposed of with solid waste.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to state and federal regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· **UN-Number**

· **DOT** UN1987

· **ADR, IMDG, IATA** 1987

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|                                  |  |
|----------------------------------|--|
| · <b>UN proper shipping name</b> |  |
| · <b>ADR</b>                     | 1987 ALCOHOLS, N.O.S. (ISOPROPANOL , METHANOL) |
| · <b>IMDG, IATA</b>              | ALCOHOLS, N.O.S. (ISOPROPANOL, METHANOL)       |

· **Transport hazard class(es)**  
· **DOT**

|                |                      |
|----------------|----------------------|
| · <b>Class</b> | 3 Flammable liquids. |
| · <b>Label</b> | 3                    |
| · <b>ADR</b>   |                      |

|                |                          |
|----------------|--------------------------|
| · <b>Class</b> | 3 (F1) Flammable liquids |
| · <b>Label</b> | 3                        |
| · <b>IMDG</b>  |                          |

|                |   |
|----------------|---|
| · <b>Label</b> | 3 |
| · <b>IATA</b>  |   |

|                |                      |
|----------------|----------------------|
| · <b>Class</b> | 3 Flammable liquids. |
| · <b>Label</b> | 3                    |

|                               |     |
|-------------------------------|-----|
| · <b>Packing group</b>        |     |
| · <b>DOT, ADR, IMDG, IATA</b> | III |

|                                 |    |
|---------------------------------|----|
| · <b>Environmental hazards:</b> |    |
| · <b>Marine pollutant:</b>      | No |

|                                       |                            |
|---------------------------------------|----------------------------|
| · <b>Special precautions for user</b> | Warning: Flammable liquids |
|---------------------------------------|----------------------------|

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|  |                                  |
|--|----------------------------------|
| · <b>Danger code (Kemler):</b>   | 30                               |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                  |
| · <b>UN "Model Regulation":</b>  | UN1987; ALCOHOLS, N.O.S.; 3; III |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**

- **SARA Section 355 (extremely hazardous substances)**

|         |              |
|---------|--------------|
| 50-00-0 | formaldehyde |
|---------|--------------|

- **SARA Section 313 (specific toxic chemical listings)**

|         |             |
|---------|-------------|
| 67-63-0 | isopropanol |
|---------|-------------|

|         |          |
|---------|----------|
| 67-56-1 | methanol |
|---------|----------|

|          |                 |
|----------|-----------------|
| 107-21-1 | ethylene glycol |
|----------|-----------------|

|         |              |
|---------|--------------|
| 50-00-0 | formaldehyde |
|---------|--------------|

- **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

- **California Proposition 65 - Chemicals known to cause cancer**

Formaldehyde is toxic, allergenic, and is known to the state of California to cause cancer.

Note: Formaldehyde poses a cancer threat through inhalation of the gas or vapor.

|         |              |
|---------|--------------|
| 50-00-0 | formaldehyde |
|---------|--------------|

- **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **California Proposition 65 - Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **TLV (Threshold Limit Value established by ACGIH)**

|         |             |    |
|---------|-------------|----|
| 67-63-0 | isopropanol | A4 |
|---------|-------------|----|

|          |                 |    |
|----------|-----------------|----|
| 107-21-1 | ethylene glycol | A4 |
|----------|-----------------|----|

|         |              |    |
|---------|--------------|----|
| 50-00-0 | formaldehyde | A2 |
|---------|--------------|----|

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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**· Hazard pictograms**

GHS02 GHS07 GHS08

**· Signal word** *Danger***· Hazard-determining components of labeling:***methanol***· Hazard statements**H226 *Flammable liquid and vapour.*H319 *Causes serious eye irritation.*H370-H336 *Causes damage to organs. May cause drowsiness or dizziness.***· Precautionary statements**P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*P260 *Do not breathe dust/fume/gas/mist/vapours/spray.*P280 *Wear protective gloves/protective clothing/eye protection/face protection.*P240 *Ground/bond container and receiving equipment.*P233 *Keep container tightly closed.*P242 *Use only non-sparking tools.*P243 *Take precautionary measures against static discharge.*P264 *Wash thoroughly after handling.*P270 *Do not eat, drink or smoke when using this product.*P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*P321 *Specific treatment (see on this label).*P307+P311 *IF exposed: Call a POISON CENTER or doctor/physician.*P337+P313 *If eye irritation persists: Get medical advice/attention.*P370+P378 *In case of fire: Use for extinction: CO2, powder or water spray.*P405 *Store locked up.*P403+P235 *Store in a well-ventilated place. Keep cool.*P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.***· Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information**

*To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company 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 can not guarantee that these are the only hazards that exist.*

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**· Department issuing MSDS:***Environmental, Health & Safety**Created by Michael J. Spinazzola***· Contact: Technical Service Representative****· Date of preparation / last revision 03/14/2014 / -****· Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**ACGIH: American Conference of Governmental Industrial Hygienists**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**Flam. Liq. 3: Flammable liquids, Hazard Category 3**Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A**STOT SE 1: Specific target organ toxicity - Single exposure, Hazard Category 1*

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