

Date Prepared: 02/14/2009

Reviewed On: 01/19/2009

1 Identification of substance:

- **Product name:** *BD CytoRich™ Red Perservative*
- **Catalog number:** 490508
- **Information department:** *Technical Services*
- **Emergency information:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems - TriPath at (336) 290-8300 or (866)-TriPath (option # 1), or ChemTrec at (800) 424-9300.

2 Composition/Data on components:

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

- **Dangerous components:**

67-63-0	isopropanol	20.0 - 25.0%
67-56-1	methanol	10.0%
107-21-1	ethylene glycol	5.0 - 10.0%
50-00-0	formaldehyde	< 1.0%

3 Hazards identification

- **Hazard description:**



T Toxic

- **Information pertaining to particular dangers for man and environment**

R 10 Flammable.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36 Irritating to eyes.

R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

R 40 Limited evidence of a carcinogenic effect.

R 43 May cause sensitization by skin contact.

- **NFPA ratings (scale 0-4)**



Health = 3

Fire = 3

Reactivity = 0

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



HEALTH 3 Health = 3

FIRE 3 Fire = 3

REACTIVITY 0 Reactivity = 0

4 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.

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- **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.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, 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 caused by the material, its products of combustion or resulting gases:**
During heating or in case of fire toxic gases may be produced.
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Person-related safety precautions:**
Ensure adequate ventilation
Keep away from ignition sources
Use respiratory protective device.
Wear protective clothing.
- **Measures for environmental protection:** Wipe up with damp sponge or mop.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Additional information:**
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**
- **Information 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.
Protect against electrostatic charges.
- **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.

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 · **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

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

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

67-63-0 isopropanol

PEL	980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI

67-56-1 methanol

PEL	260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

107-21-1 ethylene glycol

TLV	Short-term value: C 100 mg/m ³ H
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50-00-0 formaldehyde

PEL	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048
REL	Short-term value: C 0.1* ppm Long-term value: 0.016 ppm *15-min
TLV	Short-term value: C 0.37 mg/m ³ , C 0.3 ppm SEN

 · **Additional information:** The lists that were valid during the creation were used as basis.

 · **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.

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 · **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties:

· General Information

Form:	Liquid
Color:	Clear
	Light red
Odor:	Characteristic

· Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	82°C (180°F)

· Flash point:	25°C (77°F)
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· Ignition temperature:	410.0°C (770°F)
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· Auto igniting:	Product is not self igniting.
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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
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· Explosion limits:

Lower:	2.0 Vol %
Upper:	44.0 Vol %

· Vapor pressure at 20°C (68°F):	128.0 hPa (96 mm Hg)
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· Density:	Not determined
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· Solubility in / Miscibility with

Water:	Soluble
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· pH-value:	7.5
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· Solvent content:

Organic solvents:	33.8 %
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10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Materials to be avoided:** Incompatible material: strong oxidizers.

· **Dangerous reactions** No dangerous reactions known

· **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

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

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
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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

12 Ecological information:**· Ecotoxicological effects:**

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

· Other information:

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

13 Disposal considerations**· Product:****· Recommendation**

Must not be disposed of with solid waste.

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

RCRA hazardous waste - RCRA # D001 (ignitable).

· 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**· DOT regulations:**

· **Hazard class:** 3

· **Identification number:** UN1987

· **Packing group:** III

· **Proper shipping name:** ALCOHOLS, N.O.S. (ISOPROPANOL, METHANOL)

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 · **Label** 3

 · **Land transport ADR/RID (cross-border)**


- **ADR/RID class:** 3 (F1) Flammable liquids
- **Danger code (Kemler):** 30
- **UN-Number:** 1987
- **Packaging group:** III
- **Description of goods:** 1987 ALCOHOLS, N.O.S. (ISOPROPANOL , METHANOL)

 · **Maritime transport IMDG:**


- **UN Number:** 1987
- **Label** 3
- **Packaging group:** III
- **Marine pollutant:** No
- **Proper shipping name:** ALCOHOLS, N.O.S. (ISOPROPANOL, METHANOL)

 · **Air transport ICAO-TI and IATA-DGR:**


- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1987
- **Label** 3
- **Packaging group:** III
- **Proper shipping name:** ALCOHOLS, N.O.S. (ISOPROPANOL, METHANOL)

15 Regulations

 · **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.

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· 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
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· 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.

· Carcinogenicity 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
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· TLV (Threshold Limit Value established by ACGIH)

67-63-0	isopropanol	A4
107-21-1	ethylene glycol	A4
50-00-0	formaldehyde	A2

· Product related hazard information:

The product has been classified and marked in accordance with regulations on hazardous materials.

· Hazard symbols:

T Toxic

· Hazard-determining components of labeling:

methanol
formaldehyde

· Risk phrases:

10 Flammable.
 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 36 Irritating to eyes.
 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
 40 Limited evidence of a carcinogenic effect.
 43 May cause sensitization by skin contact.

· Safety phrases:

7/9 Keep container tightly closed and in a well-ventilated place.
 16 Keep away from sources of ignition - No smoking.
 20 When using do not eat or drink.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 45 In case of accident or if you feel unwell, seek medical advice immediately.
 60 This material and its container must be disposed of as hazardous waste.

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· **National regulations**· **Technical instructions (air):**

Class	Share in %
Water	59.0
I	10.6
NK	30.0

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.

· **Department issuing MSDS:**

Safety and Environment Department

MSDS created by Michael J. Spinazzola

· **Contact:** Technical Service Representative

USA