BICLSY

HC#05

HealthLink®
A Family of Medical Products

MSDS

Hematology Buffer, pH 6.4

Section 1: Identification

Product Name: Hematology Buffer, pH 6.4
For Wright's Stain Applications
Product Catalog No: 400195, 400196

Emergency Phone at Infotrac: (800) 535-5053
Date Prepared: 04/03/02

Section 2: Composition

Hazardous Component(s):		CAS Number	OSHA PEL, ACGIH TLV/STEL (PPM)
Potassium phosphate	<1%	7778-77-0	NA
Sodium Phosphate	<1%	10049-21-0	NA
Inhibitor	Trace	99-76-3	
Surfactant	Trace		

NFPA	
Health	1
Flammability	0
Reactivity	0

Section 3: Physical Data

Boiling Point:	100°F	*Specific Gravity (H2O = 1):*	~1
Vapor Pressure mm Hg@20°C:	NE	*Percent Volatile by Vol:*	NA
Vapor Density (Air 1:1)	NE	*Evaporation Rate (ether = 1):*	>1
Solubility in H20:	Complete	*Appearance & Odor:*	Clear liquid, odorless

Section 4: Fire and Explosion Hazard

Flash Point: Non-Flammable *Flammable Limits:* LEL: NA UEL: NA

Extinguishing Media: Water spray, dry chemical. CO_2 and foam

Special Firefighting Procedures: Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation Do not use direct water stream

Unusual Fire & Explosion Hazards: May give off toxic fumes under fire conditions

Section 5: Reactivity

Stability: Stable *Material to Avoid:* None known

Hazardous Decomposition or Byproducts: Oxides of carbon and nitrogen

Hazardous Polymerization: Does not occur *Conditions to Avoid:* Normal laboratory care

Section 6: Health Hazards

Routes of Entry: Inhalation, Skin and Ingestion

Acute/Chronic: Product is not expected to cause health hazards when utilizing good laboratory practices.

Carcinogenicity: Not classified as a human carcinogen

Signs/Symptoms of Exposure: Possible vision blurring, drowsiness and headache

For Technical Service Call 800-638-2625

I- 447605 C- 400195
I- 447606 C- 400196

HC#05

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Hematology Buffer pH 6.4

Section 6: Health Hazards cont'd
Emergency First Aid:

Skin: Remove contaminated clothing and wash affected area with soap and water

Eyes: Thoroughly flush eyes with water. Contact a physician if irritation persists.

Ingestion: Rinse mouth thoroughly with water, do not induce vomiting and contact a physician.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration and contact a physician.

Section 7: Safe Handling

Chemical Release or Spill: Isolate the spill area with sand or other absorbent material. Neutralize the residue with dilute sodium carbonate. Place all contaminated material in closed container for proper disposal.

Waste Disposal Method: All liquid and/or contaminated material should be disposed of in DOT approved waste containers. Comply with all Federal. State and Local regulations for disposal

Precautions for Handling and Storage: Normal laboratory care.

Section 8: Control Measures

Respiratory Protection: Not normally required.

Ventilation: Mechanical or general exhaust is sufficient.

Protective Gloves: Chemical resistant *Eye Protection:* Safety glasses.

Other Protective Clothing or Equipment: Normal laboratory apparel suggested by Good Laboratory Practices.

Work/Hygienic Practices: Wash thoroughly with soap and water after handling.

The information listed here is believed to be correct and does not purport to be all-inclusive and shall be used only as a guide. HealthLink shall not be held liable for any damage resulting from handling or contact with this product.

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Jacksonville, FL 32224

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Inhalation: May cause moderate irritation. Harmful if inhaled. Vapors may irritate: nose, throat, respiratory tract. Inhalation overexposure may lead to central nervous system depression, producing effects such as dizziness, headache, confusion, incoordination, nausea, vomiting, drowsiness, weakness, and loss of consciousness. Extreme exposures may cause other central nervous system effects including death. May cause: kidney and liver damage.

Ingestion: May cause moderate irritation. May cause: nausea, vomiting, diarrhea, abdominal discomfort, dizziness, drowsiness, lack of coordination, faintness, headache, incoordination, weakness, central nervous system depression. May cause damage to liver and kidneys. Liquid ingestion may result in vomiting; aspiration (breathing of liquid into lungs) must be avoided as liquid contact with the lungs can result in chemical pneumonitis as 10 ml IPA ingestion. May be fatal if ingestion in quantities greater than 100 ml IPA. Ingestion of significant quantities may result in red blood hemolysis.

Medical Conditions Aggravated by Exposure to Product:
Eye disorders, Respiratory system disorders, Skin disorders

Other: Avoid simultaneous exposure to isopropyl alcohol and haloalkanes, such as chloroform, trichloroethane, and carbon tetrachloride. Coexposure greatly increases the liver and toxic effects of these haloalkanes, leading to hepatitis and kidney failure. Liver damage may be evidenced by loss of appetite, jaundice and pain I the upper abdomen on the right side.

Cancer Information: This product does not contain greater than 0.1% of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Potential Environmental Effects: See Section 12.

4. First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.

Skin Contact: Flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. Do not apply oil or ointment unless ordered by the physician. Discard footwear which cannot be decontaminated.

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferable mouth-to-mouth. Get medical attention immediately.

Ingestion: If swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Note to Physician: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is done by means least likely to cause aspiration (e.g. gastric lavage after endotracheal intubation). Metabolism of isopropyl alcohol forms acetone, which may be detected in the urine and expired air. In contrast to diabetic acidosis, acidosis will occur in the absence of hyperglycemia. Hemadialysis should be considered in severe acute intoxications.

5. Fire Fighting Measures

Flash point: 73 °F
Flash point method: TCC
Flammability limits: LEL: ~1.1 UEL: ~12.7
Autoignition temperature: No Data

Extinguishing Media: Alcohol foam, carbon dioxide, dry chemical, water spray. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

Fire Fighting Methods: Evacuate are of unprotected personnel. Wear protective clothing including NIOSH-approved self contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. If container is not properly cooled, it can rupture in the heat of a fire. Run-off from the fire control may cause pollution. Do not direct a solid stream of water or foam onto hot, burning pools; this may cause frothing and increase fire intensity.

Fire and Exposure Hazards: FLAMABLE LIQUIDS. Vapors are heavier than air. Vapors may settle in low or confined areas, or travel long distances along the ground or surface to an ignition source where they may ignite, flashback, or explode. Keep away from heat sparks, flames or other sources of ignition (e.g. static electricity, pilot lights, mechanical equipment/electrical equipment). PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. This material may produce a floating fir hazard. Flame may be invisible. Approach fire with caution.

Hazardous Combustion Products:
Carbon dioxide, Carbon monoxide, Unidentifiable organic materials

6. Accidental Release Measures

Spill Clean-Up Procedures: FLAMMABLE LIQUID. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupation exposure limit. Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. DO NOT use sawdust or other cellulose-type material. Place in non-leaking

containers for immediate disposal. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

7. Handling and Storage

Storage: FLAMABLE LIQUID. Store in cool, well ventilated area away from all sources of ignition and out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Static electricity may accumulate and create a fire hazard Ground fixed equipment. Bond and ground transfer containers and equipment. May form peroxides of unknown stability. Minimize exposure to air. If peroxide formation is suspected, do not open container. Do not store or handle in aluminum equipment at temperature above 120 °F. The Occupation Safety and Health Administration (OSHA) permits the use of polyethylene containers, under its de minimis policy, for storing flammable and combustible liquids provided certain conditions are met. The complete OSHA standard on storing flammable and combustible liquids can be found in 29 CFR 1910.106.

Handling: Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCE OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Launder contaminated clothing before reuse. Air-dry contaminated clothing in a well ventilated area before laundering. Always open containers slowly to allow any excess pressure to vent.

8. Exposure Controls / Personal Protection

Engineering Controls: Local exhaust ventilation, process enclosures, or other engineering controls are required when handling or using this product to avoid over exposure. Use explosion-proof ventilation equipment. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly. Avoid creating dust or mist.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptom or keep levels below recommended exposure limits. If exposure limits are exceeded wear: NIOSH-Approved organic respirator. NIOSH-Approved self-contained breathing apparatus. Do not exceed limits establish by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever work place conditions require a respirator's use.

Eye/Face Protection: Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material. Do not wear lenses.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on conditions of use.
Protective gloves: Chemical-resistance.

Other Protective Equipment: Eye wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

General Hygiene Considerations: Wash with soap and water before meal times and at the end each work shift. Good manufacturing practices require gross amounts of any chemical be removed from the skin as soon as practical, especially before eating or smoking.

Exposure Guidelines:	OSHA		ACGIH	
Component	PEL	STEL/C	TWA	STEL/C
Isopropyl Alcohol	400 ppm 400 ppm–	Not Estab. 500 ppm+	400 ppm	500 ppm
2-Butoxyethanol	S 50 ppm S 25 ppm+	Not Estab. Not Estab.–	S 20 ppm	Not Estab.
Ethylene Glycol	Not Estab.+	C 50 ppm+	Not Estab.	*C 39.4pp,

NOTE: S= Skin notation. * Exposure limit for Ethylene Glycol, aerosol.
+ Vacated 1989 OSHA PEL(s).

9. Physical and Chemical Properties

Boiling Point (°F): N.D.
Freezing Point (°F): N.D.
Melting Point (°F): N.D.
Vapor Pressure (MM HG): N.D.
Vapor Density (Air=1): N.D.
Solubility in Water: Complete
pH: 5.25 (as is)

Specific Gravity: 0.9163 @ 25 C
% Volatile (WT%): N.D.
Evaporation Rate: N.D.
(nBuAc=1)
VOC (WT%): 47354 (estimate)
VOC (LBS/GAL): 3.63 (estimate)

10. Stability and Reactivity

Stability: Stable under normal conditions

Conditions to Avoid: Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Moderate risk of peroxide formation. Do not store or handle in aluminum equipment at temperatures above 120° F.

Incompatibility: Acids, Alkalies, Halogens or halogen compounds, Strong oxidizing agents, Ammonia Isocyanates, Chlorinated compounds, Aldehydes, Alkanolamines, Ethylene oxide, Aluminum, Oleum.

Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide, Unidentifiable organic materials.

Hazardous Polymerization: Will not occur under normal conditions.

11. Toxicology Information

LD50 Oral: No Data
LD50 Skin: No Data
LC50 Inhalation: No Data

For detailed toxicological information on individual chemical components contained in this product, contact the address in section 1 of this MSDS.

12. Ecological Information

Ecotoxicological Information: No data available
Chemical Fate Information: No data available

13. Disposal Considerations

Hazardous Waste Number: D001
Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state, and federal regulations. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

14. Transport Information (Not meant to be all inclusive)

DOT (Department of Transportation):
Proper Shipping Name: Flammable liquid, N.O.S. (Contains Ethylene Glycol Monobutyl Ether, Isopropyl Alcohol)
Hazard Class: 3
Identification Number: UN1993
Packing Group: II
Label Required: FLAMMABLE

15. Regulatory Information

Federal Regulations:
TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category:
Immediate (acute) Health Hazard: Yes
Delayed (chronic) Health Hazard: Yes
Reactive Hazard: No
Fire Hazard: Yes
Sudden Release of Pressure Hazard: No

SARA Section 302/304/313/HAP:

Component	RQ (LBS) (*1)	RQ(LBS) (*2)	TPQ(LBS) (*3)	SEC 313 (*4)	HAP (*5)
Isopropyl Alcohol	N.A.	N.A.	N.A.	No	No
2-Butoxyethanol	N.A.	N.A.	N.A.	Yes	Yes
Ethylene Glycol	5000	N.A.	N.A.	Yes	Yes

Footnotes

*1 = CERCLA Reportable Quantity
*2 = SARA Reportable Quantity
*3 = SARA EHS Threshold Planning Quantity
*4 = SARA 313 Toxic Chemical / Category
*5 = U.S. EPA Hazardous air Pollutant

State Regulations:

California – The following components are listed under Prop 65:
Ethylene Glycol Monoethyl Ether (0.004%)

Wisconsin - The following components are listed as a Wisconsin HAP:
2-Butoxyethanol

16. Other information

HMIS Rating System	NFPA Rating System
Health: 2*	Health: 2
Flammability: 3	Flammability: 3
Reactivity: 0	Reactivity: 0
* = Chronic Health Hazard	Special Hazard: None

MSDS Abbreviations: N.A. = Not applicable
N.D. = Not determined
C = Ceiling limit
N.E. / Not Estab. = Not Established
HAP = Hazardous air pollutant
VOC = Volatile Organic Compound

The data in this Material Safety Data Sheet relates only to the specific material designation and does not relate to its use in combination with any other material designation and does not relate to its use in combination with any other material or process. The data container is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which HealthLink assumes legal responsibility. This information is provided solely for your consideration, investigation and verification.

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 01/11/2006 Reviewed on 05/13/2003

Product name: Prompt System

(Contd. of page 1)

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Person-related safety precautions:** Not required.
· **Measures for environmental protection:** Wipe up with damp sponge or mop.
· **Measures for cleaning/collecting:** No special measures required.
· **Additional information:** No dangerous substances are released.

7 Handling and storage

· **Handling**
· **Information for safe handling:** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.

· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:** None.

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:** Not required.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal Protective Equipment**
· **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
· **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:** Safety glasses
· **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties:

· **General Information**

Form:	Solid.
Color:	Clear
Odor:	Characteristic

(Contd. on page 3)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 01/11/2006 Reviewed on 05/13/2003

Product name: Prompt System

(Contd. of page 2)

· **Change in condition**	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined
· **Flash point:**	Not applicable
· **Flammability (solid, gaseous)**	Product is not flammable.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Density:**	Not determined
· **Solubility in / Miscibility with Water:**	Insoluble
· **Solids content:**	100.0 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Dangerous reactions** No dangerous reactions known
· **Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritating effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification.
This product contains antibiotics. People with known or suspected allergies to antibiotics should use appropriate safety precautions when handling. People that are allergic to antibiotics may experience eye, skin, and respiratory irritation.

12 Ecological information:

· **Ecotoxical effects:**
· **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
· **General notes:** Generally not hazardous for water.

(Contd. on page 4)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 01/11/2006 Reviewed on 05/13/2003

Product name: Prompt System

(Contd. of page 3)

13 Disposal considerations

· **Product:**
· **Recommendation**
Smaller quantities can be disposed of with solid waste.
Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.
This product is not considered a RCRA hazardous 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

· **DOT regulations:**
· **Hazard class:** -

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

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

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

· **Transport/Additional information:**
If a dashed line appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation. However, if a Hazard Class Number is listed the product is regulated.

15 Regulations

· **SARA Section 355 (extremely hazardous substances)**
Substance is not listed.

· **SARA Section 313 (specific toxic chemical listings)**
Substance is not listed.

· **TSCA (Toxic Substances Control Act)**
Substance is not listed.

· **California Proposition 65 - Chemicals known to cause cancer**
Substance is not listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**
Substance is not listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**
Substance is not listed.

· **California Proposition 65 - Chemicals known to cause developmental toxicity:**
Substance is not listed.

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Product name: Prompt System

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· **Carcinogenicity categories**

· **IARC (International Agency for Research on Cancer)**
Substance is not listed.

· **NTP (National Toxicology Program)**
Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**
Substance is not listed.

· **Product related hazard information:**
Observe the general safety regulations when handling chemicals
The substance is not subject to classification according to the sources of literature known to us.
The product is not subject to identification regulations pertaining to regulations on hazardous materials.

· **National regulations**

· **Water hazard class:** Generally not hazardous for water.

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 cannot guarantee that these are the only hazards that exist.

· **Department issuing MSDS:** Safety and Environment Department
· **Contact:** Technical Service Representative