

Material Safety Data Sheet

Cytological Fixative

ACC# 88190

Section 1 – Chemical Product and Company Identification

MSDS Name: Cytological Fixative

Catalog Numbers: 23245688, 23291719

Synonyms: None.

Company Identification:

Fisher Diagnostics

Fisher Scientific Company, LLC

8365 Valley Pike

Middletown, VA 22645-0307

For information, call: 800-524-0294

Emergency Number: 800-524-0294

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
67-63-0	Isopropyl alcohol	72.0	200-661-7
67-64-1	Acetone	19.0	200-662-2
56-81-5	Glycerin	7.6	200-289-5
7732-18-5	Water	Balance	231-791-2

Hazard Symbols: F

Risk Phrases: 11

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 55 deg F. **Flammable liquid and vapor.** May cause skin irritation. May cause severe eye irritation and possible injury. May cause central nervous system depression. May cause liver and kidney damage. May cause reproductive and fetal effects. **Warning!** May cause respiratory and digestive tract irritation. May form explosive peroxides. May cause skin sensitization by skin contact.

Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: Contact may cause severe eye irritation and possible eye damage.

Skin: May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause irritation with pain and stinging, especially if the skin is abraded.

Ingestion: May cause irritation of the digestive tract. Symptoms may include: headache, excitement, fatigue, nausea, vomiting, stupor, and coma. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause respiratory tract irritation. Prolonged exposure may result in dizziness and general weakness.

Chronic: Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact may cause defatting and dermatitis. Prolonged or repeated exposure may cause adverse reproductive effects. May cause liver and kidney damage.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Urine acetone test may be helpful in diagnosis.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May be ignited by heat, sparks, and flame. Vapors may form an explosive mixture with air.

Extinguishing Media: Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: 55e deg F (12.78 deg C)

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:3.3

Upper: 25.0

NFPA Rating: (estimated) Health: 2; Flammability: 4; Instability: 1

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Isopropyl alcohol	200 ppm TWA; 400 ppm STEL	400 ppm TWA; 980 mg/m ³ TWA 2000 ppm IDLH	400 ppm TWA; 980 mg/m ³ TWA
Acetone	500 ppm TWA; 750 ppm STEL	250 ppm TWA; 590 mg/m ³ TWA 2500 ppm IDLH	1000 ppm TWA; 2400 mg/m ³ TWA
Glycerin	10 mg/m ³ TWA	none listed	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
Water	none listed	none listed	none listed

OSHA Vacated PELs: Isopropyl alcohol: 400 ppm TWA; 980 mg/m³ TWA Acetone: 750 ppm TWA; 1800 mg/m³ TWA Glycerin: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction) Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear, colorless

Odor: Alcoholic odor.

pH: Not available.

Vapor Pressure: 33 mm Hg

Vapor Density: 2.1 (Air=1)

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: 79 deg C

Freezing/Melting Point:Not available.

Decomposition Temperature:Not available.

Solubility: Soluble in water.

Specific Gravity/Density:0.8 (Water=1)

Molecular Formula:Not applicable.

Molecular Weight:Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. This material may be sensitive to peroxide formation.

Conditions to Avoid: High temperatures, incompatible materials, light, ignition sources.

Incompatibilities with Other Materials: Acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anhydride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane),

Isopropanol is susceptible to autoxidation and therefore should be classified as peroxidizable..

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, acrid smoke and fumes.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 67-63-0: NT8050000

CAS# 67-64-1: AL3150000

CAS# 56-81-5: MA8050000

CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 67-63-0:

Draize test, rabbit, eye: 100 mg Severe;

Draize test, rabbit, eye: 10 mg Moderate;

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 500 mg Mild;

Inhalation, mouse: LC50 = 53000 mg/m³;

Inhalation, rat: LC50 = 72600 mg/m³;

Inhalation, rat: LC50 = 16000 ppm/8H;

Oral, mouse: LD50 = 3600 mg/kg;

Oral, mouse: LD50 = 3600 mg/kg;

Oral, rabbit: LD50 = 6410 mg/kg;

Oral, rat: LD50 = 5000 mg/kg;

Oral, rat: LD50 = 5045 mg/kg;

Skin, rabbit: LD50 = 12800 mg/kg; <BR.

CAS# 67-64-1:

Dermal, guinea pig: LD50 = >9400 uL/kg;

Draize test, rabbit, eye: 10 uL Mild;

Draize test, rabbit, eye: 20 mg Severe;

Draize test, rabbit, eye: 20 mg/24H Moderate;

Draize test, rabbit, skin: 500 mg/24H Mild;

Inhalation, mouse: LC50 = 44 gm/m³/4H;

Inhalation, rat: LC50 = 50100 mg/m³/8H;

Oral, mouse: LD50 = 3 gm/kg;

Oral, rabbit: LD50 = 5340 mg/kg;

Oral, rat: LD50 = 5800 mg/kg; <BR.

CAS# 56-81-5:

Draize test, rabbit, eye: 126 mg Mild;

Draize test, rabbit, eye: 500 mg/24H Mild;

Draize test, rabbit, skin: 500 mg/24H Mild;

Inhalation, rat: LC50 = >570 mg/m³/1H;

Oral, mouse: LD50 = 4090 mg/kg;

Oral, rabbit: LD50 = 27 gm/kg;

Oral, rat: LD50 = 12600 mg/kg;

Skin, rabbit: LD50 = >10 gm/kg; <BR.

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg; <BR.

Carcinogenicity:

CAS# 67-63-0:

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: IARC Group 3 - not classifiable CAS# 67-64-1:

ACGIH: A4 - Not Classifiable as a Human Carcinogen CAS# 56-81-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 7732-18-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: No data available.

Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: No data available. Acute aquatic effects: Fathead minnow: LC50 = 1000 mg/L/96 Hr. Golden orfe: LC50 = 8970 mg/L/48 Hr. goldfish: LC50 = 5000 mg/L/24 Hr.

Environmental: This chemical has a low potential to affect aquatic organisms, secondary waste treatment microorganisms, and the germination and growth of some plants. It is readily biodegradable and is not expected to persist in an aquatic environment. It is not likely to bioconcentrate.

Physical: None

Other: None

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: CAS# 67-64-1: waste number U002 (Ignitable waste).

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	FLAMMABLE LIQUIDS, N.O.S.				No information available.
Hazard Class:	3				
UN Number:	UN1993				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 67-63-0 is listed on the TSCA inventory.

CAS# 67-64-1 is listed on the TSCA inventory.

CAS# 56-81-5 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 67-63-0: Effective Date: 12/15/86; Sunset Date: 12/15/96

Chemical Test Rules

CAS# 67-63-0: Testing required by manufacturers, importers, processors

Section 12b

CAS# 67-64-1: 4/12b

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA**CERCLA Hazardous Substances and corresponding RQs**

CAS# 67-64-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 67-63-0: acute, chronic, flammable. CAS # 67-64-1: acute, chronic, flammable. CAS # 56-81-5: chronic.

Section 313

This material contains Isopropyl alcohol (CAS# 67-63-0, 72 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 67-63-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-64-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 56-81-5 can be found on the following state right to know lists: Pennsylvania, Minnesota, Massachusetts.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

F

Risk Phrases:

R 11 Highly flammable.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 67-63-0: 1

CAS# 67-64-1: 0

CAS# 56-81-5: 0

CAS# 7732-18-5: No information available.

Canada - DSL/NDSL

CAS# 67-63-0 is listed on Canada's DSL List.

CAS# 67-64-1 is listed on Canada's DSL List.

CAS# 56-81-5 is listed on Canada's DSL List.
CAS# 7732-18-5 is listed on Canada's DSL List.

Canada – WHMIS

This product has a WHMIS classification of B2.

Canadian Ingredient Disclosure List

CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-64-1 is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 67-63-0: OEL-AUSTRALIA: TWA 400 ppm (980 mg/m³); STEL 500 ppm (1225 mg/m³) OEL-BELGIUM: TWA 400 ppm (985 mg/m³); STEL 500 ppm (1230 mg/m³) OEL-DENMARK: TWA 200 ppm (490 mg/m³); Skin OEL-FRANCE: STEL 400 ppm (980 mg/m³) OEL-GERMANY: TWA 400 ppm (980 mg/m³) OEL-JAPAN: STEL 400 ppm (980 mg/m³) OEL-THE NETHERLANDS: TWA 400 ppm (980 mg/m³); Skin OEL-THE PHILIPPINES: TWA 400 ppm (980 mg/m³) OEL-RUSSIA: STEL 400 ppm (10 mg/m³) OEL-SWEDEN: TWA 150 ppm (350 mg/m³); STEL 250 ppm (600 mg/m³) OEL-SWITZERLAND: TWA 400 ppm (980 mg/m³); STEL 800 ppm OEL-TURKEY: TWA 200 ppm (500 mg/m³) OEL-UNITED KINGDOM: TWA 400 ppm (980 mg/m³); STEL 500 ppm; Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV CAS# 67-64-1: OEL-AUSTRALIA: TWA 500 ppm (1185 mg/m³); STEL 1000 ppm OEL-AUSTRIA: TWA 750 ppm (1780 mg/m³) OEL-BELGIUM: TWA 750 ppm (1780 mg/m³); STEL 1000 pp OEL-CZECHOSLOVAKIA: TWA 800 mg/m³; STEL 4000 mg/m³ OEL-DENMARK: TWA 250 ppm (600 mg/m³) OEL-FINLAND: TWA 500 ppm (1200 mg/m³); STEL 625 ppm (1500 mg/m³) OEL-FRANCE: TWA 750 ppm (1800 mg/m³) OEL-GERMANY: TWA 1000 ppm (2400 mg/m³) OEL-HUNGARY: TWA 600 mg/m³; STEL 1200 mg/m³ OEL-INDIA: TWA 750 ppm (1780 mg/m³); STEL 1000 ppm (2375 mg/m³) OEL-JAPAN: TWA 200 ppm (470 mg/m³) OEL-THE NETHERLANDS: TWA 750 ppm (1780 mg/m³) JAN9 OEL-THE PHILIPPINES: TWA 1000 ppm (2400 mg/m³) OEL-POLAND: TWA 200 mg/m³ OEL-RUSSIA: TWA 200 ppm; STEL 200 mg/m³ OEL-SWEDEN: TWA 250 ppm (600 mg/m³); STEL 500 ppm (1200 mg/m³) OEL-SWITZERLAND: TWA 750 ppm (1780 mg/m³) OEL-TURKEY: TWA 1000 ppm (2400 mg/m³) OEL-UNITED KINGDOM: TWA 750 ppm (1810 mg/m³); STEL 1250 ppm OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV CAS# 56-81-5: OEL-AUSTRALIA: TWA 10 mg/m³ OEL-BELGIUM: TWA 10 mg/m³ OEL-FINLAND: TWA 20 mg/m³ OEL-FRANCE: TWA 10 mg/m³ OEL-THE NETHERLANDS: TWA 10 mg/m³ OEL-UNITED KINGDOM: TWA 10 mg/m³ OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 3/16/1998

Revision #3 Date: 12/03/2002

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

MATERIAL SAFETY DATA SHEET
PRODUCT NAME: Shandon Cytospin® Collection Fluid

(CITY, STATE AND ZIP CODE)

Pittsburgh, PA 15275

(CITY, STATE AND ZIP CODE)

Runcorn, Cheshire WA7 1PR

% (by weight)

30 - 60 F

1 - 5 F, T

1 - 5 F, Xi

CARCINOGENICITY No No No

171 Industry Drive (412) 788-1133

EMERGENCY OVERVIEW

EMERGENCY TELEPHONE NUMBER

CHEM • TEL (800) 255-3924 Outside USA (813) 248-0585

EMERGENCY TELEPHONE NUMBER

+44 (0) 1928 562547

TELEPHONE NUMBER FOR INFORMATION

MANUFACTURER'S NAME (Distributor in the Americas)

Thermo Electron Corporation

DATE PREPARED:

ADDRESS (NUMBER, STREET, P.O. BOX) TELEPHONE NUMBER FOR INFORMATION

SUPERSEDES:

September 17, 2003

December 1, 2001

(b) Indicates that the Resource Conservation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.

SECTION 3 - HAZARDS IDENTIFICATION

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Shandon Cytospin® Collection Fluid

PART NUMBER: 230001

GENERAL USE: Cytology collection fluid

PRODUCT DESCRIPTION: Clear green flammable liquid, characteristic alcohol odor

Flammable liquid. Contains methanol, harmful if swallowed. Product cannot be made non-poisonous. Contact with skin and eyes may cause irritation. Hazard symbols for this product - F, Xn. Risk Phrases - R10, 20/21/22

OSHA REGULATED?

POTENTIAL HEALTH EFFECTS

NTP?

INHALATION: High concentrations may cause dizziness, drowsiness, nausea, and vomiting.

SKIN: Brief contact may cause slight irritation; no evidence of other adverse effects from available information.

EYES: Contact may cause minor irritation.

(a,c) See Section 15

RISK PHRASES

Full Text Section 16

Hazard

Symbol

HAZARDOUS COMPONENTS

Ethanol

Methyl alcohol (a,b,c)

Isopropyl alcohol

COUNTRY

COUNTRY

USA

United Kingdom

DISTRIBUTOR'S NAME (Outside the Americas)

Thermo Electron Corporation

ADDRESS (NUMBER, STREET, P.O. BOX)

SECTION 2 - HAZARDOUS INGREDIENTS

93/96 Chadwick Road, Astmoor

EINECS # CAS #

CHEM • TEL (813) 248-0585

64-17-5 200-578-6

67-56-1 200-659-6

67-63-0 200-661-7

INGESTION: Causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait, and coma. Ingestion of a large quantity of this product will result in methyl alcohol poisoning.

IARC MONOGRAPHS?

R-11

R-11, 23/24/25, 39

R-11, 36, 67

TWA ppm TWA mg/m3 STEL ppm STEL mg/m3 TWA ppm TWA mg/m3 STEL ppm STEL mg/m3

-- -- -- -- 1000 1884 -- --

-- -- -- -- 200 262 250 327

400 980 500 1225 400 983 500 1230

GENERAL HAZARDS: Product is flammable. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

EXTINGUISHING MEDIA

Carbon dioxide, water, water fog, dry chemical, chemical foam

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CAUTION - FLAMMABLE - Evacuate and ventilate area; confine and absorb into absorbent; place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center (800) 424 - 8802; refer to CERCLA 40 CFR 302 and SARA Title III, Section 313 40 CFR 372 for detailed instructions concerning reporting requirements. Do not discharge into lakes, ponds, streams or public waters.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Self - contained respiratory equipment; cool containers to prevent pressure buildup and possible explosion when exposed to extreme heat.

Caution - material is flammable!

EYE PROTECTION: Protective eyeglasses or chemical safety goggles. Refer to 29 CFR 1910.133 or European Standard EN166.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Safety eyebath nearby

PROTECTIVE GLOVES: Recommended for general protection

HAZARDOUS COMBUSTION PRODUCTS

Smoke, fumes, oxides of carbon

SECTION 6 - ACCIDENTAL RELEASE MEASURES

FIRE FIGHTING PROCEDURES

PERSONAL PROTECTION:

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep container closed when not in use; protect containers from abuse; protect

from extreme temperatures. CAUTION - FLAMMABLE - keep away from all sources of ignition. "Empty" containers may contain residue which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well ventilated work areas to minimize exposure when handling this material.

Isopropyl alcohol

Closed containers can explode due to buildup of pressure when exposed to extreme heat. Vapors may cause a flash fire or ignite explosively. Vapors may travel a considerable distance to a source of ignition and flash back.

Ethanol

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Shandon Cytospin® Collection Fluid

SKIN: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

EYES: Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

HAZARDOUS COMPONENTS

NIOSH ACGIH

RESPIRATORY PROTECTION (SPECIFY TYPE): Not ordinarily required, however, NIOSH approved respirator recommended to prevent overexposure.. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations.

WORK / HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

September 17, 2003

SECTION 5 - FIRE FIGHTING MEASURES

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

Methyl alcohol (a,b,c)

INGESTION: Give two glasses of water for dilution; Induce vomiting by sticking fingers down throat; never give anything by mouth to an unconscious person; seek medical attention.

XXX

XXX

PROPER SHIPPING NAME:

DOT HAZARD CLASS / Pack Group:

REFERENCE:

UN / NA IDENTIFICATION NUMBER:

LABEL:

HAZARD SYMBOLS:

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced.

CONDITIONS TO AVOID: None

145,000 ppm / 4H 9100 mg / kg

Oral - rat

3 (3B)

3 / III 49 CFR 173.150, .203, .242

Ethyl alcohol mixture

WASTE DISPOSAL METHOD: According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used. Dispose of in accordance with Local, State, and Federal Regulations. This

product may produce hazardous vapors or fumes in a closed disposal container creating a dangerous environment. Refer to "40 CFR Protection of Environment Parts 260 - 299" for complete waste disposal regulations. Consult your local, state, or Federal Environmental Protection Agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.

SECTION 14 - TRANSPORT INFORMATION

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

SECTION 13 - DISPOSAL CONSIDERATIONS

4.7 - 6.7 0.930 - 0.933

VAPOR PRESSURE

pH

LEL: 3.3% UEL: 19% > 1

FLAMMABLE LIMITS VAPOR DENSITY (AIR = 1)

85° F (29.4° C) TCC

SPECIFIC GRAVITY (WATER = 1)

43 mm Hg @ 20° C

Hazardous Components

Ethanol

Methyl alcohol (a,b,c)

Isopropyl alcohol

200-661-7

Oral - rat Inhalation - rat 200-659-6

3450 mg / kg

Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

BOILING POINT / BOILING RANGE

FLASH POINT VISCOSITY

Complete

SOLUBILITY IN WATER

183° F (83.8° C)

UN TDG Class / Pack Group:

RID/ADR Dangerous Goods Code:

(Specify Species)

WILL NOT OCCUR:

LD50 of Ingredient

3 / III

3 / III

IMDG HAZARD CLASS:

IATA HAZARD CLASS / Pack Group: 3 / III

FLAMMABLE LIQUID

22,500 ppm / 4H 5840 mg / kg 67-63-0

UN 1170

SECTION 12 - ECOLOGICAL INFORMATION

Inhalation - rat

STABILITY UNSTABLE:

SECTION 10 - STABILITY AND REACTIVITY

AUTOIGNITION TEMPERATURE

Clear green liquid, characteristic alcohol odor

APPEARANCE AND ODOR

F

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

67-56-1

(Specify Species and Route)

Like that of water

MATERIAL SAFETY DATA SHEET

LC50 of Ingredient

EINECS #

PRODUCT NAME: Shandon Cytospin® Collection Fluid

CONDITIONS TO AVOID: Extreme temperatures, open flames, sparks

793° F (423° C) < 1

Inhalation - rat

20,000 ppm / 10H

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, strong acids

SECTION 11 - TOXICOLOGICAL INFORMATION

64-17-5

200-578-6

CAS #

STABLE:

HAZARDOUS POLYMERIZATION MAY OCCUR:

Oral - mouse

EVAPORATION RATE (WATER = 1)

WGK Water Quality Index: 1

RISK PHRASES:

R10 Flammable.

Notes & full R-Phrase text

R36 Irritating to eyes.

R10 Flammable. R39 Danger of very serious irreversible effects.

2

3

0

G

REVISION SUMMARY:

MSDS Prepared by:

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

S7 Keep container tightly closed.

Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 2.

EINECS (European Inventory of Existing Commercial Chemical Substances)

Components of this product identified by CAS number are listed on the DSL or NDSL and may or may not be listed in Section 2 of this document. Only ingredients classified as "hazardous" are listed in Section 2 unless otherwise indicated.

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)

4 = EXTREME

Safety Glasses, Gloves, Vapor Respirator PERSONAL PROTECTIVE EQUIPMENT

2 = MODERATE

HMIS HAZARD RATINGS

Chem-Tel, Inc.

1305 N. Florida Ave.

Tampa, Florida USA 33602 (800) 255-3924 Outside USA (813) 248-0573

No revisions available

PRODUCT NAME: Shandon Cytospin® Collection Fluid

MATERIAL SAFETY DATA SHEET

September 17, 2003

TSCA (USA - Toxic Substance Control Act)

SARA TITLE III (USA - Superfund Amendments and Reauthorization Act)

SECTION 15 - REGULATORY INFORMATION

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as

described in Section 1.

HEALTH

311/312 Hazard Categories

REACTIVITY

3 = HIGH

Flammable Harmful

Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

IDL (Canadian Ingredient Disclosure List)

FLAMMABILITY

This MSDS has been revised in the following sections:

1 = SLIGHT

(a) A "Yes" in the SARA TITLE III column in Section 2 indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

(c) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24000 lbs) or greater amounts, according to 40 CFR 302.

313 Reportable Ingredients:

SECTION 16 - OTHER INFORMATION

R67 Vapours may cause drowsiness and dizziness.

0 = INSIGNIFICANT

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SAFETY PHRASES: SYMBOL(S) REQUIRED FOR LABEL

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed

S16 Keep away from sources of ignition

S36/37 Wear suitable protective clothing and gloves

CPR (Canadian Controlled Products Regulations)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

CERCLA (USA - Comprehensive Response Compensation and Liability Act)

Immediate health, flammable hazard

Material Safety Data Sheet

Reagent Alcohol

ACC# 20087

Section 1 - Chemical Product and Company Identification

MSDS Name: Reagent Alcohol

Catalog Numbers: S79885, A962-200, A962-4, A962-P4, A962F-1GAL, A962F1GALLC, A962P-4, A962P1GAL, A962RB200, A962S-4, HC6001GAL, NC9650491, FFRRF

Synonyms: Ethanol, Dehydrated Alcohol; Ethyl Hydrate; Specially Denatured Alcohol.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
64-17-5	Ethyl alcohol	90.0	200-578-6
67-56-1	Methyl alcohol	5.0	200-659-6
67-63-0	Isopropyl alcohol	5.0	200-661-7

Hazard Symbols: XN F

Risk Phrases: 11 20/21/22 68/20/21/22

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 55 deg F. **Flammable liquid and vapor.** May cause central nervous system depression. Cannot be made non-poisonous. **Danger!** Poison! May be fatal or cause blindness if swallowed. May form explosive peroxides. Vapor harmful. May be absorbed through intact skin. Causes severe eye irritation. Causes respiratory tract irritation. May cause digestive tract irritation. Causes moderate skin irritation. This substance has caused adverse reproductive and fetal effects in humans. May cause liver, kidney and heart damage.

Target Organs: Kidneys, heart, central nervous system, liver, gastrointestinal system, cardiovascular system, eyes.

Potential Health Effects

Eye: Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Skin: Causes moderate skin irritation. May be absorbed through the skin. May cause cyanosis of the extremities.

Ingestion: May be fatal or cause blindness if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Causes respiratory tract irritation. May cause visual impairment and possible permanent blindness. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.

Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Effects may be delayed. Ethanol may inhibit methanol metabolism. Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.

Antidote: Ethanol may inhibit methanol metabolism.

Section 5 - Fire Fighting Measures

General Information: Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Will be easily ignited by heat, sparks or flame.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: 55e deg F (12.78 deg C)

Autoignition Temperature: 685 deg F (362.78 deg C)

Explosion Limits, Lower: 3.3 vol %

Upper: 19 vol %

NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethyl alcohol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m ³ TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m ³ TWA
Methyl alcohol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m ³ TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m ³ TWA
Isopropyl alcohol	200 ppm TWA; 400 ppm STEL	400 ppm TWA; 980 mg/m ³ TWA 2000 ppm IDLH	400 ppm TWA; 980 mg/m ³ TWA

OSHA Vacated PELs: Ethyl alcohol: 1000 ppm TWA; 1900 mg/m³ TWA Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA Isopropyl alcohol: 400 ppm TWA; 980 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear chemical goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear, colorless

Odor: aromatic odor

pH: No data

Vapor Pressure: 44 mm Hg

Vapor Density: 1.24 kg/m³

Evaporation Rate: No data

Viscosity: 1.2 cp

Boiling Point: 173.3 deg F

Freezing/Melting Point: -173.4 deg F

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: 0.8

Molecular Formula: CH₃CH₂OH

Molecular Weight: 46.0414

Section 10 - Stability and Reactivity

Chemical Stability: Stability unknown. This material may be sensitive to peroxide formation.

Conditions to Avoid: High temperatures, incompatible materials, ignition sources, excess heat, oxidizers.

Incompatibilities with Other Materials: Acetyl bromide, alkyl aluminum salts, beryllium dihydride, carbon tetrachloride + metals, chloroform + heat, chloroform + sodium hydroxide, cyanuric chloride, diethyl zinc, nitric acid, potassium-tert-butoxide, strong acids, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), aliphatic amines, isocyanates, chromic anhydride, Oxidants (such as barium perchlorate, bromine, chlorine, hydrogen peroxide, lead perchlorate, perchloric acid, sodium hypochlorite), perchloric acid, phosphorus trioxide, Attacks some forms of plastics, rubbers, and coatings., active metals, strong oxidizing agents, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, silver nitrate, mercuric nitrate, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, disulfur dichloride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide, halogens, aluminum.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 64-17-5: KQ6300000

CAS# 67-56-1: PC1400000

CAS# 67-63-0: NT8050000

LD50/LC50:

CAS# 64-17-5:

Draize test, rabbit, eye: 500 mg Severe;

Draize test, rabbit, eye: 500 mg/24H Mild;

Draize test, rabbit, skin: 20 mg/24H Moderate;

Inhalation, mouse: LC50 = 39 gm/m³/4H;

Inhalation, rat: LC50 = 20000 ppm/10H;

Oral, mouse: LD50 = 3450 mg/kg;

Oral, rabbit: LD50 = 6300 mg/kg;

Oral, rat: LD50 = 9000 mg/kg;

Oral, rat: LD50 = 7060 mg/kg; <BR.

CAS# 67-56-1:

Draize test, rabbit, eye: 40 mg Moderate;

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 20 mg/24H Moderate;

Inhalation, rabbit: LC50 = 81000 mg/m³/14H;

Inhalation, rat: LC50 = 64000 ppm/4H;

Oral, mouse: LD50 = 7300 mg/kg;

Oral, rabbit: LD50 = 14200 mg/kg;

Oral, rat: LD50 = 5600 mg/kg;

Skin, rabbit: LD50 = 15800 mg/kg; <BR.

CAS# 67-63-0:

Draize test, rabbit, eye: 100 mg Severe;

Draize test, rabbit, eye: 10 mg Moderate;

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, skin: 500 mg Mild;

Inhalation, mouse: LC50 = 53000 mg/m³;

Inhalation, rat: LC50 = 72600 mg/m³;

Inhalation, rat: LC50 = 16000 ppm/8H;

Oral, mouse: LD50 = 3600 mg/kg;

Oral, mouse: LD50 = 3600 mg/kg;

Oral, rabbit: LD50 = 6410 mg/kg;

Oral, rat: LD50 = 5000 mg/kg;

Oral, rat: LD50 = 5045 mg/kg;

Skin, rabbit: LD50 = 12800 mg/kg; <BR.

Carcinogenicity:

CAS# 64-17-5:

ACGIH: A4 - Not Classifiable as a Human Carcinogen CAS# 67-56-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 67-63-0:**ACGIH:** A4 - Not Classifiable as a Human Carcinogen**IARC:** IARC Group 3 - not classifiable**Epidemiology:** Methanol and phenol have been shown to produce fetotoxicity in the embryo or fetus in laboratory animals. Specific developmental abnormalities for methanol include the musculoskeletal, urogenital, and cardiovascular systems.**Teratogenicity:** CAS# 64-17-5: Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.**Reproductive Effects:** CAS# 64-17-5: Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre-mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).**Neurotoxicity:** No data available.**Mutagenicity:** CAS# 64-17-5: DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 ppH/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).**Other Studies:** The hazards associated with methanol may be seen in this product.

Section 12 - Ecological Information

Ecotoxicity: Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified) via: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test CAS# 64-17-5: When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.**Environmental:** CAS# 64-17-5: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.**Physical:** No information available.**Other:** No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	ALCOHOLS, N.O.S.				ALCOHOLS NOS
Hazard Class:	3				3
UN Number:	UN1987				UN1987
Packing	II				II

Group:					
Additional Info:					FLASHPOINT 14C

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 64-17-5 is listed on the TSCA inventory.

CAS# 67-56-1 is listed on the TSCA inventory.

CAS# 67-63-0 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 67-63-0: Effective Date: 12/15/86; Sunset Date: 12/15/96

Chemical Test Rules

CAS# 67-63-0: Testing required by manufacturers, importers, processors

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 64-17-5: acute, chronic, flammable. CAS # 67-56-1: acute, flammable. CAS # 67-63-0: acute, chronic, flammable.

Section 313

This material contains Methyl alcohol (CAS# 67-56-1, 5 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This material contains Isopropyl alcohol (CAS# 67-63-0, 5 0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 64-17-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-63-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm. California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN F

Risk Phrases:

R 11 Highly flammable.

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

R 68/20/21/22 Harmful : possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 64-17-5: 0

CAS# 67-56-1: 1

CAS# 67-63-0: 1

Canada - DSL/NDSL

CAS# 64-17-5 is listed on Canada's DSL List.

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 67-63-0 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D1B.

Canadian Ingredient Disclosure List

CAS# 64-17-5 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 64-17-5: OEL-AUSTRALIA: TWA 1000 ppm (1900 mg/m³) OEL-BELGIUM: TWA 1000 ppm (1880 mg/m³) OEL-CZECHOSLOVAKIA: TWA 1000 mg/m³; STEL 5000 mg/m³ OEL-DENMARK: TWA 1000 ppm (1900 mg/m³) OEL-FINLAND: TWA 1000 ppm (1900 mg/m³); STEL 1250 ppm (2400 mg/m³) OEL-FRANCE: TWA 1000 ppm (1900 mg/m³); STEL 5000 pp OEL-GERMANY: TWA 1000 ppm (1900 mg/m³) OEL-HUNGARY: TWA 1000 mg/m³; STEL 3000 mg/m³ OEL-THE NETHERLANDS: TWA 1000 ppm (1900 mg/m³) OEL-THE PHILIPPINES: TWA 1000 ppm (1900 mg/m³) OEL-POLAND: TWA 1000 mg/m³ OEL-RUSSIA: STEL 1000 mg/m³ OEL-SWEDEN: TWA 1000 ppm (1900 mg/m³) OEL-SWITZERLAND: TWA 1000 ppm (1900 mg/m³) OEL-THAILAND: TWA 1000 ppm (1900 mg/m³) OEL-TURKEY: TWA 1000 ppm (1900 mg/m³) OEL-UNITED KINGDOM: TWA 1000 ppm (1900 mg/m³) JAN9 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV CAS# 67-56-1: OEL-ARAB Republic of Egypt: TWA 200 ppm (260 mg/m³); Skin OEL-AUSTRALIA: TWA 200 ppm (260 mg/m³); STEL 250 ppm; Skin OEL-BELGIUM: TWA 200 ppm (262 mg/m³); STEL 250 ppm; Skin OEL-CZECHOSLOVAKIA: TWA 100 mg/m³; STEL 500 mg/m³ OEL-DENMARK: TWA 200 ppm (260 mg/m³); Skin OEL-FINLAND: TWA 200 ppm (260 mg/m³); STEL 250 ppm; Skin OEL-FRANCE: TWA 200 ppm (260 mg/m³); STEL 1000 ppm (1300 mg/m³) OEL-GERMANY: TWA 200 ppm (260 mg/m³); Skin OEL-HUNGARY: TWA 50 mg/m³; STEL 100 mg/m³; Skin JAN9 OEL-JAPAN: TWA 200 ppm (260 mg/m³); Skin OEL-THE NETHERLANDS: TWA 200 ppm 260 mg/m³); Skin OEL-THE PHILIPPINES: TWA 200 ppm (260 mg/m³) OEL-POLAND: TWA 100 mg/m³ OEL-RUSSIA: TWA 200 ppm; STEL 5 mg/m³; Skin OEL-SWEDEN: TWA 200 ppm (250 mg/m³); STEL 250 ppm (350 mg/m³); Skin OEL-SWITZERLAND: TWA 200 ppm (260 mg/m³); STEL 400 ppm; Skin OEL-THAILAND: TWA 200 ppm (260 mg/m³) OEL-TURKEY: TWA 200 ppm (260 mg/m³) OEL-UNITED KINGDOM: TWA 200 ppm (260 mg/m³); STEL 250 ppm; Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV CAS# 67-63-0: OEL-AUSTRALIA: TWA 400 ppm (980 mg/m³); STEL 500 ppm (1225 mg/m³) OEL-BELGIUM: TWA 400 ppm (985 mg/m³); STEL 500 ppm (1230 mg/m³) OEL-DENMARK: TWA 200 ppm (490 mg/m³); Skin OEL-FRANCE: STEL 400 ppm (980 mg/m³) OEL-GERMANY: TWA 400 ppm (980 mg/m³) OEL-JAPAN: STEL 400 ppm (980 mg/m³) OEL-THE NETHERLANDS: TWA 400 ppm (980 mg/m³); Skin OEL-THE PHILIPPINES: TWA 400 ppm (980 mg/m³) OEL-RUSSIA: STEL 400 ppm (10 mg/m³) OEL-SWEDEN: TWA 150 ppm (350 mg/m³); STEL 250 ppm (600 mg/m³) OEL-SWITZERLAND: TWA 400 ppm (980 mg/m³); STEL 800 ppm OEL-TURKEY: TWA 200ppm (500 mg/m³) OEL-UNITED KINGDOM: TWA 400 ppm (980 mg/m³); STEL 500 ppm; Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 6/19/1998

Revision #6 Date: 12/03/2002

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.



Printing date 07/02/2003

Reviewed on 07/02/2003

1 Identification of substance:

- **Product details:**
 - **Product name:** *Spraycyte*
 - **Catalog number:** *427180*
- **Manufacturer/Supplier:**
 - *BD Diagnostic Systems*
 - *7 Loveton Circle*
 - *Sparks, MD 21152*
 - *Tel: (410) 771-0100 or (800) 638-8663*
- **Information department:** *Technical Services*
- **Emergency information:**
 - *In case of a chemical emergency, spill, fire, exposure, or accident contact BD Diagnostic Systems at (410)771-0100 or (800)638-8663, or ChemTrec at (800)424-9300.*

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** *Mixture of the substances listed below with nonhazardous additions.*

- **Dangerous components:**

67-63-0	isopropanol	82.4%
---------	-------------	-------

3 Hazards identification

- **Hazard description:**



Xi Irritant
F Highly flammable

- **Information pertaining to particular dangers for man and environment**
 - *R 11 Highly flammable.*
 - *R 36 Irritating to eyes.*
 - *Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.*
 - *54.7 % by mass of the contents are flammable*
 - *Keep out of the reach of children/flammable*
- **Classification system**
 - *The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.*
- **NFPA ratings (scale 0-4)**



Health = 1
Fire = 4
Reactivity = 3

4 First aid measures

- **General information** *No special measures required.*
- **After inhalation** *Seek medical treatment in case of complaints.*
- **After skin contact** *Immediately wash with water and soap and rinse thoroughly.*

(Contd. on page 2)

USA



Printing date 07/02/2003

Reviewed on 07/02/2003

Product name: Spraycyte

(Cont'd. of page 1)

- After eye contact Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- After swallowing If symptoms persist consult doctor.
- Information for doctor Show this label.

5 Fire fighting measures

- Suitable extinguishing agents
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 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:
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.
- Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.
- Storage
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- 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.

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: (1230) mg/m ³ , (500) ppm Long-term value: (983) mg/m ³ , (400) ppm
NIC-200	491; 400; 984; A 4

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

(Cont'd. on page 3)



Material Safety Data Sheet

acc. to ISO/DIS 11014

Page 3/7

Printing date 07/02/2003

Reviewed on 07/02/2003

Product name: Spraycote

(Contd. of page 2)

- **Personal Protective Equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **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. latex, nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties:

· General Information

Form:	Aerosol
Color:	Colorless
Odor:	Alcohol-like

· Change in condition

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

· **Flash point:** 13°C (55°F)

· **Ignition temperature:** 425.0°C (797°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:

Lower:	2.0 Vol %
Upper:	12.0 Vol %

· **Vapor pressure at 20°C (68°F):** 43.0 hPa (32 mm Hg)

· **Density:** Not determined

· Solubility in / Miscibility with

Water: Insoluble

· **pH-value:** Not applicable

· Solvent content:

Organic solvents: 49.9 %

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

(Contd. on page 4)

USA



Printing date 07/02/2003

Reviewed on 07/02/2003

Product name: Spraycyte

(Contd. of page 3)

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

11 Toxicological information

· **Acute toxicity:**

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

67-63-0 isopropanol

Oral	LD50	4570 mg/kg (rat)
Dermal	LD50	13400 mg/kg (rab)
Inhalative	LC50/4 h	30 mg/l (rat)

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

Irritant

The product shows the following dangers according to internally approved calculation methods for preparations:

12 Ecological information:

· **Ecotoxicological effects:**

· **Other information:**

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

· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

13 Disposal considerations

· **Product:**

Recommendation

Must not be disposed of with solid waste.

Must adhere to state and federal regulations.

Disposal must be made according to the regulations found in 40 CFR 261.

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:**

2.1

(Contd. on page 5)

USA



Product name: Spraycote

(Contd. of page 4)

· **Identification number:** UN1950
 · **Packing group:** -
 · **Proper shipping name (technical name):** AEROSOLS, flammable
 · **Label** 2.1

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



· **ADR/RID class:** 2 5F Gases
 · **Danger code (Kemler):** 23
 · **UN-Number:** 1950
 · **Packaging group:** -
 · **Description of goods:** 1950 AEROSOLS

· **Maritime transport IMDG:**



· **IMDG Class:** 2
 · **UN Number:** 1950
 · **Label** 2.1
 · **Packaging group:** -
 · **EMS Number:** F-D,S-U
 · **Marine pollutant:** No
 · **Proper shipping name:** AEROSOLS

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



· **ICAO/IATA Class:** 2.1
 · **UNID Number:** 1950
 · **Label** 2.1
 · **Packaging group:** -
 · **Proper shipping name:** AEROSOLS, flammable

15 Regulations

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

None of the ingredients is listed.

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

67-63-0 isopropanol

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

67-63-0 isopropanol

(Contd. on page 6)



Printing date 07/02/2003

Reviewed on 07/02/2003

Product name: *Spraycyte*

(Contd. of page 5)

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

None of the ingredients is listed.

· **California Proposition 65 - Chemicals known to cause reproductive toxicity**

None of the ingredients is listed.

· **Carcinogenicity categories**

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

67-63-0 | isopropanol | 3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **Product related hazard informations:**

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

· **Hazard symbols:**

Xi Irritant

F Highly flammable

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

isopropanol

· **Risk phrases:**

11 Highly flammable.

36 Irritating to eyes.

· **Safety phrases:**

2 Keep out of the reach of children.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

46 If swallowed, seek medical advice immediately and show this container or label.

51 Use only in well-ventilated areas.

· **Special labeling of certain preparations:**

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

54.7 % by mass of the contents are flammable

Keep out of the reach of children

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
III	54.7

· **Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.**

18A

(Contd. on page 7)



Material Safety Data Sheet
acc. to ISO/DIS 11014

Page 7/7

Printing date 07/02/2003

Reviewed on 07/02/2003

Product name: *Spraycye*

(Cont'd. of page 6)

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: Safety and Environment Department*
- Contact: Technical Service Representative*

USA

hc2 HPV/CT/GC

1	<u>IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY</u>	
1.1	<u>Identification of the Product:</u>	SPECIMEN TRANSPORT MEDIUM (HPV/CT/GC)
1.2	<u>Identification of Company</u>	Digene Corporation 1201 Clopper Road Gaithersburg, MD 20878
1.3	<u>Emergency Tel. No.</u>	Domestic (U.S.) +1-301-944-7000 (8:30 AM – 5 PM Eastern M-F) International (U.K.) +44 20 7348 3500 (9 AM – 6 PM Local U.K. Time M-F)

2 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Substance</u>	<u>CAS No.</u>	<u>% Present</u>	<u>Symbol(s)</u>	<u>EC</u>	<u>R-Phrases</u>
Aliphatic amine hydrochloride	Proprietary	<10	Xn (Harmful)	22-36/38	
Sodium azide*	26628-22-8	0.05	T* (Very toxic) and N (Dangerous for the environment)	28-32-50/53	
Other components* & water	-	Up to 100	-	-	-

*These components are at concentrations that do not meet EU or US OSHA criteria for classifying as dangerous or hazardous, respectively, under these regulations.

3. HAZARDS IDENTIFICATION

Based on percentages of hazardous ingredients in this product, this product is not classified as "dangerous" under EU Directives or hazardous under US OSHA Hazard Communication regulations.

4 FIRST AID MEASURES

- In case of swallowing - Wash out mouth thoroughly with water. Do not induce vomiting. If concerned, seek medical advice.
- In case of inhalation - Remove to fresh air. If concerned, seek medical advice.
- In case of contact with eyes - Rinse immediately with plenty of water for at least 15 minutes, avoiding contamination of unaffected eye. If concerned, seek medical advice.
- In case of contact with skin - Wash with plenty of water. If concerned, seek medical advice.

5 FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media: Suitable - Will not burn unless dried out. Water jets, mist, foam, carbon dioxide or other dry agents, if contents dried out and burning.
Not suitable- None
- 5.2 If involved in a fire: If vials are broken and contents allowed to dry out, will burn and may give off noxious fumes (e.g. mainly carbon and nitrogen oxides and some chlorinated compounds). Wear breathing apparatus and protective clothing.

10 STABILITY AND REACTIVITY

- 10.1 Conditions to avoid: None known.
- 10.2 Materials to avoid: Avoid mixing with oxidising agent and strong bases.
- 10.3 Hazardous decomposition products:
Mainly carbon and nitrogen oxides, and some chlorinated products may be released on burning or heating to decomposition.

11 TOXICOLOGICAL INFORMATIONAcute effects^(2,3)

This formulation has not been tested, but based on its components and the application of the EU "conventional method," it is not classified as "dangerous." However, it has not been fully tested, so precautions should be taken to avoid exposure.

Chronic effects^(2,3)

No known chronic effects provided that precautions are taken to avoid acute effects described above.

12 ECOLOGICAL INFORMATION

This formulation has not been tested. Therefore, avoid discharge to water systems.

13 DISPOSAL CONSIDERATIONS

Users should acquaint themselves with local regulations.

Waste should not be considered as "hazardous waste". Under European Waste regulations, it is categorised as Catalogue Index No. 18 01 06 (18 = wastes from human or animal care and/or related research; 01 = wastes from natal care, diagnosis, treatment or prevention of disease in humans and 06 = chemicals containing dangerous substances).

Do not dispose of waste down the drain. Disposal may be carried out by collecting the waste and burning under controlled conditions at a licensed waste material processor; stack gases will need to be scrubbed.

14 TRANSPORT INFORMATION

Proper Shipping Name: Not classified as dangerous for transport

UN No.: None Symbol: None

Hazard Class: None

ADR/RID Item No: None

IATA/DGR limits: None

IMDG/IMO Code: None

15 REGULATORY INFORMATION

Components listed as "dangerous" in Annex I to Directive 67/548/EEC⁽²⁾

<u>Component or impurity</u>	<u>Annex I Number</u>
Aliphatic amine hydrochloride	Proprietary

Classified according to the Directives 67/548/EEC and 1999/45/EC, and their various amendments, and US hazard communication regulations (29 CFR 1910.1200) and labelled as below:-

SPECIMEN TRANSPORT MEDIUM

Warning symbol(s)	-	None
Warning words	-	None
Risk phrases	-	None
Safety Phrases	-	None

16 OTHER INFORMATION

<u>Occupational Exposure Levels</u>	<u>mg/m³</u>		<u>Reference</u>
	<u>8h-TWA</u>	<u>Short-term</u>	
Sodium azide	0.1	0.3 (15-min)	EU-IOELV,
	-	0.3 (15-min)	UK
	0.3 (ceiling)	-	US-ACGIH TLV; US OSHA PEL, Denmark, Norway Holland Sweden Finland Germany
	0.3	0.3 (15-min)	
	0.27	0.81 (15-min)	
	0.2	-	

Inventories - All components are listed in TSCA and EINECS inventories

Intended uses - Laboratory use by experienced clinicians for *in vitro* diagnoses.

Revisions - The latest information changes are marked with | in the left margin

References - (1) In-house files.
(2) Annex I to Dangerous Substance Directive 67/548/EEC
(3) EU Directive 1999/45/EC

The format of this Safety Data Sheet conforms to the requirements of EC Directive 91/155/EEC and US ANS/CMA guidelines.

Disclaimer - Although reasonable care has been taken in the preparation of this document to assess and summarize the hazard properties of the product, the user must satisfy himself that the information contained herein is pertinent to permit safe handling under his use conditions, since the supplier cannot foresee all conditions of use. The information contained herein is not intended as a product specification.

Product Code

Page 1

Product Identification: PreservCyt® Solution

Preparation Date: 10/24/01

1. CHEMICAL AND COMPANY IDENTIFICATION

MSDS Number 3

General Use: A methanol based, buffered preservative solution to support cells during transport and slide preparation.

Product Description: A methanol based, buffered preservative solution

Trade Name/Chemical Family/Synonyms: PreservCyt® Solution

EMERGENCY TELEPHONE NUMBERS: (24 hours a day and 7 days a week) For Health/Transportation/Chemical Spills (Multilingual capabilities and free calls accepted)

- Continental United States: (800) 424-9000
- Outside of continental United States: +(703) 527-3887

MANUFACTURER

Cytoc Corporation
85 Swanson Road
Boxborough, Massachusetts 01719
USA

Australian Representative

Cytoc Australia
Suite 302, Third Floor
2 Julius Avenue North Ryde
Macquarie Centre, NSW 2113
Australia
Telephone: (2) 9888 8000
Emergency Telephone:
+ (703) 527 3887

European Representative

Cytoc (UK) Limited
15 Lloyd Court
Manor Royal Estate
Crawley W. Sussex
RH10 2QX
United Kingdom

Poison Schedule Number: S8
UN 1993 (USA)
UN 1992 (Outside the USA)
Haz Chem Code: 2WE

2. COMPOSITION/INFORMATION OF INGREDIENTS

<u>Component</u>	<u>Wt. %</u>	<u>CAS Registry #</u>
Water/Methanol*	Prop.	67-56-1
Blended organic acids and sequestering agent buffers	< 1%	NA

* THIS INGREDIENT IS REPORTABLE UNDER EPA SARA TITLE III
OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

EXPOSURE LIMITS 8 hrs. TWA (ppm, mg/m³)

<u>Component</u>	<u>Hazard</u>	<u>OSHA STEL</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Worksafe Australia</u>
Methanol*	Toxic, Flammable	Not est.	200 ppm 262 mg/m ³	200 ppm 262 mg/m ³	TWA: 200 ppm 262 mg/m ³ STEL: 250 ppm 328 mg/m ³

*Label symbols and risk phrases outside the USA

Flammable (F)

- R10 - Flammable

Toxic (T)

- R23/25 - Toxic by inhalation and if swallowed.

*Hazardous according to criteria of Worksafe Australia

3. HAZARD IDENTIFICATION:

EMERGENCY OVERVIEW: Material is both flammable and toxic. Inhalation will cause nonspecific discomfort (nausea, weakness), temporary CNS depression with anesthetic effects, blindness. As little as 60 ml. may cause blindness and/or death.

POTENTIAL HEALTH EFFECTS:

INHALATION: May cause CNS depression, nausea, weakness, anesthetic effects or blindness.

EYE CONTACT: May cause transient irritation.

INGESTION: May cause intoxication, CNS depression, nausea, and dizziness. May damage liver, kidneys and nervous system. May cause blindness and/or death. Material is a systemic poison.

TARGET ORGANS: liver, kidneys, and central nervous system.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with preexisting diseases of the retina or liver may have increased susceptibility to toxicity at lower levels of successive exposure.

CHRONIC: Liquid and vapor can penetrate skin and mucous membranes. May cause chronic liver, kidney or CNS disorders.

4. FIRST AID MEASURES:

INHALATION: Remove patient to fresh air. If symptoms of intoxication or vision problems are apparent, get immediate medical aid.

EYE CONTACT: Immediately flush with clean water for at least 15 minutes. Get medical aid.

SKIN CONTACT: Remove contaminated clothing and shoes. Flush affected area with copious amounts of water. If irritation or other symptoms are present, get immediate medical assistance.

INGESTION: **Do Not Induce Vomiting.** Give one or two glasses of water and get immediate medical aid.

NOTES TO PHYSICIAN: Treat for CNS depression and possible renal failure.

5. FIRE FIGHTING MEASURES:

FLASHPOINT (^oF/^oC) AND METHOD 80/26.5 Closed Cup **AUTOIGNITION TEMPERATURE: 725/385**

FLAMMABLE LIMITS:

INGREDIENT: Methanol UEL: 36 LEL: 6.7

GENERAL HAZARD: Flammable material. Heated material may form toxic and/or explosive vapors.

FIRE FIGHTING INSTRUCTIONS: Wear full turnout gear with self-contained breathing apparatus. If material is not involved in fire, attempt to cool with water or remove from area. **FLAME INVISIBLE IN DAYLIGHT.**

FIRE FIGHTING EQUIPMENT: Wear full turnout gear with self-contained breathing apparatus.

EXTINGUISHING MEDIA: **FOAM** Yes **ALCOHOL FOAM** Yes **C02** Yes
 DRY CHEMICAL Yes **WATER** Yes **OTHER** Water Fog

HAZARDOUS COMBUSTION PRODUCTS: Carbon Oxides

NATIONAL FIRE PROTECTION ASSOCIATION:

NFPA Hazard Rating: 0=Insignificant, 1=Slight, 2=Moderate, 3=High, 4=Extreme, U=Unknown *=No Information

Health: 1

Flammability: 3

Reactivity: 0

SPECIAL INFORMATION: None

Page 4

Preparation Date: 10/24/01

MSDS Number 3

12. **ECOLOGICAL INFORMATION:** Material has very low aquatic toxicity
TLM 96: over 1000

13. **DISPOSAL CONSIDERATION:**
RCRA Hazard Class: U154

14. **TRANSPORTATION INFORMATION: DOT (Department of Transportation)**

	<u>(USA)</u>	<u>(outside USA)</u>
Proper Shipping Name:	Flammable liquids, n.o.s. (Methanol)	Flammable liquids, toxic, n.o.s. (Methanol)
Hazard Class:	3	3, 6.1
Identification Number:	UN1993	UN1992
Packing Group:	PGIII	PGIII

15. **REGULATORY INFORMATION:**

TSCA (Toxic Substances Control Act): listed

CERCLA (Comprehensive Environmental Response Compensation and Liability Act):

RQ = 5,000 lbs./2,268 kg.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

311/312 Hazard Categories:

Flammable, Poison

Methanol 1.0% Concentrate

CALIFORNIA PROPOSITION 65: No

Canada : This mixture contains methanol, a chemical listed on the WHMIS Ingredient Disclosure List.

EU label information:

Symbols T,F

Nature of special risk attributed to dangerous substances:

R10, R23/25 Flammable, toxic by inhalation and if swallowed.

Safety advice concerning dangerous chemical substances:

S24/25 Avoid contact with skin and eyes.

S37/39 Wear chemically resistant gloves and eye protection.

16. **OTHER INFORMATION:** None

REFERENCES: None

N/A = Not Applicable

N/D = Not Determined

Not Est. = Not Established

Prop = Proprietary Information

Information Note: Where no corresponding data was contained in manufacturer's MSDS, additional research is required and available upon request. THE INFORMATION RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OF HER OWN PARTICULAR USE.