

Safety Data Sheet

Cytology Fixative

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name : Cytology Fixative
Product Number : 3801800; 3801825
SDS Date : September 3, 2015

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use : For the fixation of cytology specimens.
Uses Advised Against : All other uses.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Preparer : Leica Biosystems Richmond, Inc
5205 Route 12
Richmond, IL 60071
800-225-3035
LBSNA-LBS-QA@LEICABIOSYSTEMS.COM

1.4 Emergency Telephone Number

Emergency Spill : 1-800-424-9300 (ChemTrec)
+1 703-527-3887 International calls (call collect)
13 11 26 (Australia 24 Hr Poisons Information Centre)
Other Information : 1-800-225-3035

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008) :

Physical:	Health:	Environmental:
Flammable Liquid – Category 2	Specific Target Organ Toxicity (Single Exposure) – Category 1	Not hazardous

2.2 Label Elements

Hazard Pictograms :  

Signal Word : DANGER!

Hazard Statements	:	H225 H370	Highly flammable liquid and vapour. Suspected of damaging fertility or the unborn child.
Precautionary Statements	:	P210 P233 P240 P241 P242 P243 P260 P264 P270 P280 P303+361+351 P308+311 P370+378 P403+235 P405 P501	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take action to prevent static discharge. Do not breathe vapours. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF exposed or concerned: Get medical advice/attention. In case of fire: Use dry chemical, foam, or water spray for extinction. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents/container in accordance with all local and national regulations.

2.3 Other Hazards

Other hazards which do not result in classifications : None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	CLP/GHS Classification (1272/2008)
Ethanol	64-17-5 200-578-6	<90	Flammable Liquid – Category 2 (H225)
Isopropanol	67-63-0 200-661-7	<5	Flammable Liquid – Category 2 (H225) Eye Irritation – Category 2A (H319) Specific Target Organ Toxicity (Single Exposure) – Category 1 (H370)
Methanol	67-56-1 200-659-6	<5	Flammable Liquid Category 2 (H225) Acute Toxicity Category 3 (H301, H311, H331) Specific Target Organ Toxicity (Single Exposure) – Category 1 (H370)

See Section 16 for full text of GHS and EU Classifications.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting upper and lower eyelids. Get medical attention immediately.

LeicaBiosystems.com

- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly after handling. Get medical attention immediately.
- Inhalation** : Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing, such as a collar, tie, belt, or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

See Section 11 for more detailed information on health effects.

4.2 Most important symptoms and effects, both acute and delayed

- Eye contact** : May cause eye irritation.
- Skin contact** : May cause skin irritation.
- Inhalation** : May cause respiratory tract irritation. Inhalation of vapors may cause abdominal pain and nervous system effects, including dizziness, drowsiness, nausea, vomiting, visual disturbances, and unconsciousness.
- Ingestion** : Harmful or fatal if inhaled.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Immediate medical treatment is required for ingestion.
- Specific treatments** : No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

- Suitable extinguishing media** : Use dry chemical, alcohol foam, carbon dioxide (CO₂), or water spray.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Unusual fire and explosion hazards** : Highly flammable liquid and vapor. Vapors are heavier than air and will travel along surfaces to remove ignition sources and flash back. Vapors will collect in low areas. Vapors may be ignited by static sparks. Flames may be invisible in daylight.
- Combustion products** : Oxides of carbon; smoke.

5.3 Advice for fire-fighters

- Special protective equipment for fire-fighters** : Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.
- Special protective action for fire-fighters** : Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

- For emergency responders** : Wear appropriate protective equipment. Eliminate all ignition sources and

ventilate the area with explosion-proof equipment. Prevent entry into basements or confined areas.

6.2 Environmental precautions

Environmental precautions : Prevent entry in storm sewers and waterways. Report spill as required by local and federal regulations.

6.3 Methods and materials for containment and cleaning up

For small & large spill : Stop spill if it is safe to do so. Absorb with dry earth or non-combustible material. Use non-sparking tools and equipment. Collect into a suitable container for disposal.

6.4 Reference to other sections

Refer to Section 8 for personal protective equipment, and Section 13 for disposal information.

SECTION 7: HANDLING and STORAGE

7.1 Precautions for safe handling

Protective measures : Avoid contact with eyes, skin, and clothing. Avoid breathing vapors. Use only with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and laundry before re-use. Keep product away from heat, sparks, and all other sources of ignition. Electrically bond and ground transfer equipment. Use appropriately rated electrical equipment in areas where this material is handled and stored.

7.2 Conditions for safe storage, including any incompatibilities

Protect containers from physical damage. Store in a cool area. Keep away from excessive heat and open flames. Keep containers closed when not in use. Store away from oxidizers. Empty containers contain product residues. Do not cut, weld, braze, etc. on or near empty containers.

7.3 Specific end use(s)

Industrial uses : None identified.
Professional uses : For the fixation of cytology specimens.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Chemical Name	US OEL	EU IOEL	UK OEL	Germany OEL
Ethanol	1,000 ppm TWA OSHA PEL 1,000 ppm STEL ACGIH TLV	None established	1,000 ppm TWA	500 ppm TWA 1,000 ppm STEL
Isopropanol	400 ppm TWA OSHA PEL 400 ppm STEL ACGIH TLV	None established	400 ppm TWA 500 ppm STEL	200 ppm TWA 400 ppm STEL

Methanol	200 ppm TWA 250 ppm STEL skin	200 ppm TWA skin	200 ppm TWA 250 ppm STEL	200 ppm TWA 800 ppm STEL
----------	----------------------------------	------------------	-----------------------------	-----------------------------

Refer to local or national authority for exposure limits not listed above.

Chemical Name	Biological Limit Value
Isopropanol	Acetone in urine 40 mg/L, end of shift at end of workweek (ACGIH)
Methanol	Methanol in urine 15 mg/L, end of shift (ACGIH)

8.2 Exposure controls

- Recommended monitoring procedure** : Collection on charcoal tubes with analysis by gas chromatography.
- Appropriate engineering controls** : Use with adequate local exhaust ventilation to maintain exposure levels below the occupational exposure limits.
- Personal protective measures**
- Eye/face protection** : Wear safety glasses or chemical goggles.
- Skin protection** : Impervious clothing as needed to avoid skin contact.
- Hands** : Impervious gloves recommended (butyl rubber).
- Respiratory protection** : None needed with adequate ventilation. If the occupational exposure limit is exceeded, use an approved organic vapor respirator. Selection of respiratory protection depends on the contaminant type, form, and concentration. Select in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.
- Other protection** : Suitable washing facilities should be available.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- Appearance** : Colorless liquid
- Odor** : Alcohol
- Odor threshold** : Not applicable
- pH** : Not available
- Melting/freezing point** : Not available
- Boiling point** : Not available
- Flash point** : 57°F (14°C)
- Lower flammability limit** : Not available
- Upper flammability limit** : Not available
- Evaporation rate** : Not available
- Vapor density (air = 1)** : Not available
- Vapor pressure** : Not available
- Specific gravity (H₂O = 1)** : 0.79
- Relative density** : 0.79
- Solubility** : Complete
- Octanol/water partition coefficient** : Not available
- Autoignition temperature** : Not available
- Decomposition temperature** : Not available
- Viscosity** : Not available
- Explosive properties** : Vapors may be explosive in confined areas
- Oxidizing properties** : None
- Molecular formula** : Not available

Molecular weight : Not available

9.2 Other information

No additional information available

SECTION 10: STABILITY and REACTIVITY

- 10.1 Reactivity : This material is not reactive under normal conditions.
- 10.2 Chemical stability : Normally stable.
- 10.3 Possibility of hazardous reactions : Reaction with strong oxidizers will generate heat and cause fire.
- 10.4 Conditions to avoid : Avoid heat, sparks, flames, and all other sources of ignition.
- 10.5 Incompatible materials : Oxidizing agents, strong acids, and bases.
- 10.6 Hazardous decomposition products : Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Potential health effects:

- Eye contact : May cause irritation with redness, tearing, and swelling.
- Skin contact : May cause irritation and dryness. Repeated exposure may cause dermatitis. May be harmful if absorbed through the skin.
- Inhalation : May cause respiratory tract irritation and central nervous system effects, such as dizziness, drowsiness, nausea, vomiting, visual disturbances, and unconsciousness.
- Ingestion : Swallowing may cause gastrointestinal effects, including abdominal pain, nausea, and diarrhea. May cause central nervous system effects, including drowsiness, dizziness, nausea, vomiting, visual disturbances, and unconsciousness. May cause permanent blindness.

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Ethanol	LD50 Oral	Rat	7,060 mg/kg	-
	LC50 Inhalation	Rat	20,000 ppm	10 hr
Isopropanol	LD50 Oral	Rat	5,045 mg/kg	-
	LD50 Dermal	Rabbit	12,800 mg/kg	-
Methanol	LD50 Oral	Rat	5,628 mg/kg	-
	LC50 Inhalation	Rat	64,000 ppm	4 hr
	LD50 Dermal	Rabbit	15,800 mg/kg	-
Disodium 3,3-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(94-aminonaphthalene-1-sulphonate)	LD50 Oral	Rat	15,200 mg/kg	-

- Skin corrosion/irritation : No data available for mixture.
- Eye damage/irritation : No data available for mixture.
- Respiratory irritation : No data available for mixture.
- Respiratory sensitization : No data available for mixture.
- Skin sensitization : No data available for mixture.
- Germ cell mutagenicity : No data available for mixture.
- Carcinogenicity : No data available for mixture.
- Reproductive Toxicity : No data available for mixture. Ethanol is known to cause developmental toxicity when

LeicaBiosystems.com

ingested during pregnancy.

Specific Target Organ Toxicity:

- Single exposure** : Methanol has been found to cause visual and nervous system damage in studies with humans and animals.
- Repeat exposure** : Ethanol has been found to cause damage to the liver, nervous system, and reproductive system.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Ethanol	LC50 13,000 mg/L	Rainbow trout	96 hours
	LC50 9,268 – 14,221 mg/L	Daphnia magna	48 hours
	EC50 9,310 mg/L	Green algae	48 hours
Isopropanol	LC50 11,130 mg/L	Fathead minnow	48 hours
	LC50 1,400 mg/L	Brown shrimp	48 hours
Methanol	LC50 29,400 mg/L	Fathead minnow	96 hours
	EC50 >10,000 mg/L	Daphnia magna	24 hours

12.2 Persistence and degradability : No data available.

12.3 Bioaccumulative potential : No data available.

12.4 Mobility in soil : No data available.

12.5 Results of PVT and vPvB assessment : No data available.

12.6 Other adverse effects : No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 Packing group	14.5 Environmental hazards
US DOT	UN1987	Alcohols, N.O.S., (Contains: Ethanol, Methanol)	3	II	No
Canada TDG	UN1987	Alcohols, N.O.S., (Contains: Ethanol, Methanol)	3	II	No
EU ADR/RID	UN1987	Alcohols, N.O.S., (Contains: Ethanol, Methanol)	3	II	No
IMDG	UN1987	Alcohols, N.O.S., (Contains: Ethanol, Methanol)	3	II	No
IATA	UN1987	Alcohols, N.O.S., (Contains: Ethanol, Methanol)	3	II	No

14.6 Special precautions for user : None.

14.7 Transport in bulk according to Annex III MARPOL 73/78 and the IBC Code : Not determined

SECTION 15: REGULATORY INFORMATION

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

US Regulations

OSHA hazard classification : Flammable, irritant, target organ effects
 TSCA Inventory : All of the components are listed on the TSCA Inventory.
 SARA 302 : This product does not contain chemicals regulated under SARA 302.
 SARA 311 Hazard Classification : Acute health hazard; chronic health hazard; fire hazard
 SARA 313 : This product contains the following chemicals that are regulated under SARA Title III, Section 313:

	Product name	CAS number	%
Form R – Reporting requirements	Methanol	67-56-1	<5
Supplier notifications	Methanol	67-56-1	<5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to the copies of the SDS subsequently redistributed.

CERCLA Section 103 : The RQ for the product, based on the RQ for Methanol (5% maximum) of 5,000 lbs is 100,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state, and local regulations.

California Prop 65 : This product contains the following chemical(s) which are known to the state of California to cause cancer, reproductive toxicity, or birth defects:

Product name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Methanol	No	Yes	No	No

SECTION 16: OTHER INFORMATION

Revision history : Updated formatting

LeicaBiosystems.com

CLP/GHS Classification and H Phrases for Reference (See Section 3)

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H336 May cause drowsiness or dizziness.
H370 Causes damage to nervous system and eyes.

NFPA Rating	Health: 2	Fire: 3	Instability: 0
HMIS Rating	Health: 2	Fire: 3	Physical Hazard: 0

Notice to reader:

This Safety Data Sheet (SDS) has been prepared in accordance with the Classification, Labelling, and Packaging (CLP) regulation in the EU and the Globally Harmonized System (GHS) (29CFR 1910.1200) in the US. It complies with the requirements of the Canadian Controlled Products Regulations. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability 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.

