

Material Safety Data Sheet

Leukostat (TM) Solution I

Section 1 - Chemical Product and Company Identification

MSDS Name:

Leukostat (TM) Solution I

Catalog Numbers:

CS430-B, CS430-B4, CS430B, CS430B4

Synonyms:

Mixture

Company Identification:Fisher Scientific - Fairlawn
Fairlawn, NJ 07410**Company Phone Number:**

(201) 796-7100

Emergency Phone Number:

(201) 796-7100

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, US:

(202) 483-7616

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RISK MANAGEMENT & SAFETY

OCT 14 1997

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ELINCS
7732-18-5	Water	98.9	231-791-2
7782-85-6	Disodium orthophosphate heptahydrate	0.5	Not available.
7778-77-0	Dihydrogen potassium phosphate	0.5	231-913-4
17372-87-1	Acid red 87	0.1	241-409-6
50-00-0	Formaldehyde	0.04	200-001-8

Hazard Symbols:

Risk Phrases:

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Liquid.

Warning! Cancer suspect agent. May cause respiratory tract irritation. May cause skin irritation. Causes eye irritation. Causes digestive tract irritation. May cause allergic respiratory reaction. May cause allergic skin reaction. This substance has caused adverse reproductive and fetal effects in animals.

Target Organs: respiratory system.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

May cause skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Low hazard for usual industrial handling.

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Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation:

May cause allergic respiratory reaction. May cause respiratory tract irritation.

Chronic:

No information found.

Section 4 - First Aid Measures

Eyes:

Get medical aid. Gently lift eyelids and flush continuously with water.

Skin:

Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

None reported.

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.

Extinguishing Media:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature:

Not applicable.

Flash Point:

Not applicable.

NFPA Rating:

Not published.

Explosion Limits:

Lower: Not available. Upper: Not available.

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., dry sand or earth), then place into a chemical waste container.

Section 7 - Handling and Storage

Handling:

Use with adequate ventilation. Avoid contact with eyes. Keep container tightly closed.

Storage:

Store in a cool, dry place.

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Storage Code:
Blue

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None listed.	None listed.	None listed.
Disodium orthophosphate heptahydrate	None listed.	None listed.	None listed.
Dihydrogen potassium phosphate	None listed.	None listed.	None listed.
Acid red 87	None listed.	None listed.	None listed.
Formaldehyde	None listed.	0.016 ppm TWA; C 0.1 ppm (15 min)	0.75 ppm TWA PEL; 2 ppm STEL; 0.5 ppm TWA action level; Irritant and potential;

OSHA Vacated PELs

Formaldehyde: 3 ppm TWA (unless specified in 1910.1048)

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.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Liquid.

Odor: No information available.

pH: No information available.

Vapor Pressure: No information available.

Vapor Density: No information available.

Evaporation Rate: No information available.

Viscosity: No information available.

Boiling Point: No information available.

Freezing/Melting Point: No information available.

Decomposition Temperature: No information available.

Solubility: Soluble in water.

Specific Gravity/Density: No information available.

Molecular Formula: Mixture

Molecular Weight: No information available.

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Section 10 - Stability and Reactivity

Chemical Stability:

Stable.

Conditions to Avoid:

None reported.

Incompatibilities with Other Materials

None reported.

Hazardous Decomposition Products

Irritating and toxic gases.

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 7782-85-6: WC4600000.

CAS# 7778-77-0 unlisted.

CAS# 17372-87-1: LM5850000.

CAS# 50-00-0: LP8925000.

LD50/LC50:

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

CAS# 7782-85-6: Oral, rat: LD50 = 12930 mg/kg.

CAS# 7778-77-0: No information available. CAS# 17372-87-1: Oral, mouse: LD50 = 2344 mg/kg.

CAS# 50-00-0: Inhalation, mouse: LC50 = 400 mg/m³/2HInhalation, rat: LC50 = 203 mg/m³

Oral, mouse: LD50 = 42 mg/kg

Oral, rat: LD50 = 100 mg/kg

Skin, rabbit: LD50 = 270 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7782-85-6: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7778-77-0: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 17372-87-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 50-00-0

ACGIH: A2-suspected human carcinogen

California: Not listed.

NIOSH: occupational carcinogen

NTP: Suspect carcinogen

OSHA: Possible Select carcinogen

IARC: Group 2A carcinogen

Epidemiology:

A variety of excess cancers have been associated with potential exposure to formaldehyde. Nasal and nasopharyngeal cancers seem to be the most common types. However, cancers such as lung cancer and cancer of the brain, bladder, colon, skin and leukemias have been reported. IARC has determined that the body of data suggests sufficient evidence for carcinogenicity in animals, but limited evidence for carcinogenicity to humans.

Teratogenicity:

Effects on the newborn by exposure to formaldehyde have been reported in rats by inhalation, such as behavioral effects, biochemical and metabolic effects and reduced weight gain. Cytological changes were also noted. Specific developmental abnormalities were reported by the intraperitoneal route of exposure in mice.

Reproductive:

Paternal effects were reported in male rats by inhalation, oral ingestion and intraperitoneal injection of formaldehyde. Organs affected included the prostate, seminal vesicle, Cowpers gland, urethra, testes, sperm duct and epididymis. Spermatogenesis was also affected.

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Mutagenicity

Neurotoxicity

Section 12 - Ecological Information

Ecotoxicity:

No information available.

Environmental:

No information reported.

Physical:

No information available.

Other:

None.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Maximum Concentration of Contaminants

None of the components are on this list.

RCRA D Series - Chronic Toxicity Reference Levels

None of the components are on this list.

RCRA F Series Wastes

None of the components are on this list.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 50-00-0: waste number U122.

RCRA Substances Banned from Land Disposal

CAS# 50-00-0 is banned from land disposal according to RCRA.

Section 14 - Transport Information

	US DOT	IATA	IMO	RID/ADR	Canadian TDG
Shipping Name:		No information available.	No information available.	No information available.	No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information

US Federal**TSCA**

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

CAS# 7782-85-6 is not listed on the TSCA Inventory. It is for research and development use onl CAS# 7778-77-0 is listed on the TSCA Inventory.

CAS# 17372-87-1 is listed on the TSCA Inventory.

CAS# 50-00-0 is listed on the TSCA Inventory.

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Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA/SARA Reportable Quantities (RQ)

CAS# 50-00-0: final RQ = 100 pounds (45.4 kg)

CERCLA/SARA Threshold Planning Quantities (TPQ)

CAS# 50-00-0: TPQ = 500 pounds

SARA Codes

CAS# 7778-77-0: acute.

CAS# 17372-87-1: acute.

CAS# 50-00-0: acute, chronic.

CERCLA/SARA Section 313

Formaldehyde is not at a high enough concentration to be reportable under Section 313.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 50-00-0 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 50-00-0 is listed as a Hazardous Substance under the CWA.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

CAS# 50-00-0 is considered highly hazardous by OSHA.

US State**State Right to Know**

Formaldehyde can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations

WARNING: This product contains Formaldehyde, a chemical known to the State of California to cause cancer.

No information available.

No information available.

No information available.

No information available.

CAS# 50-00-0: no significant risk level = 40 ug/day

European/International Regulations**European Labelling in Accordance with EC Directives:**

Hazard Symbols:

Safety Phrases: S 24/25 Avoid contact with skin and eyes.

Exposure Limits

Section 16 - Other Information

Added NFPA codes to Section 5. Added SARA classifications to Section 15.

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Section 3, Emer Overview, added "MAY CAUSE RESPIRATORY TRACT IRRITAT..".

Section 3, Emer Overview, added "MAY CAUSE SKIN IRRITATION...".

Section 3, Emer Overview, added "CAUSES EYE IRRITATION...".

Section 3, Emer Overview, added "MAY CAUSE ALLERGIC RESPIRATORY REAC..".

Section 3, Emer Overview, added "CANCER SUSPECT AGENT...".

Section 3, Emer Overview, added "THIS SUBSTANCE HAS CAUSED ADVERSE R..".

Section 3, Emer Overview, added "CAUSES DIGESTIVE TRACT IRRITATION...".

Section 3, Emer Overview, added "WARNING!..".

Section 3, Emer Overview, added "MAY CAUSE ALLERGIC SKIN REACTION...".

Section 3, Eye Effects, added "Causes eye irritation...".

Section 3, Skin Effects, added "Low hazard for usual industrial han..".

Section 3, Skin Effects, added "May cause skin sensitization, an al..".

Section 3, Skin Effects, added "May cause skin irritation...".

Section 3, Inhalation Effects, added "May cause respiratory tract irritat..".

Section 3, Inhalation Effects, added "May cause allergic respiratory reac..".

Section 3, Ingestion Effects, added "May cause gastrointestinal irritati..".

Section 3, Chronic Effects, added "No information found...".

Section 4, Eye First Aid, added "Get medical aid...".

Section 4, Eye First Aid, added "Gently lift eyelids and flush conti..".

Section 4, Skin First Aid, added "Get medical aid if irritation devel..".

Section 4, Skin First Aid, added "Flush skin with plenty of soap and..".

Section 4, Inhalation First Aid, added "Get medical aid immediately...".

Section 4, Inhalation First Aid, added "Remove from exposure to fresh air i..".

Section 4, Inhalation First Aid, added "If not breathing, give artificial r..".

Section 4, Ingestion First Aid, added "If victim is conscious and alert, g..".

Section 4, Ingestion First Aid, added "Get medical aid...".

Section 5, Extinguishing Media, added "Substance is noncombustible; use ag..".

Section 5, General Firefighting, added "As in any fire, wear a self-contain..".

Section 6, Spills/Leaks, added "Absorb spill with inert material, (..".

Section 7, Handling, added "Use with adequate ventilation...".

Section 7, Handling, added "Avoid contact with eyes...".

Section 7, Handling, added "Keep container tightly closed...".

Section 7, Storage, added "Store in a cool, dry place...".

Section 8, Engin. Controls, added "Good general ventilation should be..".

Section 8, Eye Protection, added "Wear appropriate protective eyeglas..".

Section 8, Skin Protection, added "Wear appropriate gloves to prevent..".

Section 8, Clothing, added "Wear appropriate protective clothin..".

Section 8, Respirators, added "Follow the OSHA

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respirator regulati..".
Section 9, Physical Properties has changed.
Section 10, Stability, added "Stable...".
Section 10, Condit. to Avoid, added "none reported..".
Section 10, Decomposition Prod., added "irritating and toxic gases..".
Section 10, Incompatibilities has changed.
Section 11, Epidemiology has changed.
Section 11, Neurotoxicity has changed.
Section 11, Teratogenicity has changed.
Section 11, Mutagenicity has changed.
Section 11, Reproductive has changed.
Section 11, Other Info has changed.
Section 12, Ecology Info has changed.
Section 12, Environ. Info has changed.
Section 12, Physical Info has changed.
Section 12, Other Info has changed.

MSDS Creation Date: September 11, 1995

Revision Date: March 4, 1996

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