

MUCICARMINE STAIN KIT MSDS

Catalog # 884, kit components:

EZ Mucicarmine

EZ Green

Weigert Solution A

Weigert Solution B

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: EZ MUCICARMINE

Catalog number: 871, 884C

General use: Stain to demonstrate acid polysaccharides.

Product description: Carmine dye in aqueous aluminum chloride solution.

Manufacturer

Anatech Ltd.
1020 Harts Lake Road
Battle Creek, MI 49037
USA

Emergency contact information

Health:	Anatech Ltd.	800-262-8324	8 am - 5 pm ET, M-F
Transportation:	CHEMTREC	800-424-9300	24 hours

2. COMPOSITION AND INFORMATION ON INGREDIENTS

(Note: Percentage composition is withheld as a trade secret.)

<u>Component</u>	<u>CAS #</u>	<u>Exposure limits</u>
Carmine dye (C.I. 75470)	1390-65-4	Not established.
Aluminum chloride	7446-70-0	Not established for solution.
Thymol	201-944-8	Not established.

3. HAZARDS IDENTIFICATION

Emergency overview

Dark red liquid.

Irritant to eyes. Not likely to pose a hazard under normal conditions of use.

Potential health effects

(Human health effects only.)

Primary route(s) of exposure: Eyes and skin.

Inhalation: Inhalation of vapors during normal conditions of use are not likely to present a health hazard.

Eye: Contact of liquid with eyes may cause irritation.

Skin: Brief contact with skin is nonirritating.

Ingestion: Effects are unknown but anticipated to be slight.

3. HAZARDS IDENTIFICATION (continued)

Chronic effects: None expected under anticipated conditions of use.

Signs and symptoms: Affected skin will be stained pink. Eyes may water. Effects on the gastrointestinal tract may include discomfort and nausea.

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air if coughing or difficulty in breathing is experienced. Consult a physician if symptoms persist or worsen. Administer oxygen or artificial respiration as needed.

Eye: Flush eyes for at least 15 minutes in an eyewash station. If symptoms persist after washing, consult a physician.

Skin: Remove contaminated clothing, including footwear; wash before reuse or discard. For minor exposure, wash affected area with water and mild soap, rinsing thoroughly; apply a good quality skin lotion. In cases of prolonged, repeated or extensive exposure, rinse affected area or entire body for at least 15 minutes. For severe conditions, consult a physician.

Ingestion: Call a poison control center immediately. If victim is conscious, have him/her drink several glasses of water to dilute the solution. Induce vomiting only upon the advice of a physician or poison control authority.

5. FIRE FIGHTING MEASURES

Flammable properties

Flash point: > 200°F (> 93.3°C) closed cup.

Flammable limit: Not determined.

Autoignition temperature: Not determined.

Flammability classification: Class IIIB Combustible liquid (OSHA).

Flame propagation: None.

Hazardous products of combustion: Carbon oxides and hydrogen chloride gas.

Extinguishing media: ABC rated portable fire extinguishers should be used. Professional fire fighters may use water spray, dry chemical or carbon dioxide.

Fire fighting instructions: No special precautions are necessary.

6. ACCIDENTAL RELEASE MEASURES

Wear protective gloves, impermeable aprons and splash-proof goggles. Use a damp sponge or mop to remove spilled liquid. Wash contaminated area with water. Discard absorbents and other contaminated solids in a trash receptacle. Liquid waste may be discarded down the drain with approval by wastewater authorities, or may be removed by a licensed waste hauler.

Comply with all applicable governmental regulations on spill reporting and on the handling and disposal of hazardous waste.

7. HANDLING AND STORAGE

Handling: Wear a plastic or rubber apron, protective gloves and splash-proof goggles. Avoid contact with skin and eyes. Do not continue to wear contaminated clothing after a spill.

Storage: Store in the refrigerator.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Good general room ventilation is essential.

Personal protective equipment

Respiratory protection: None needed.

Skin protection: Anatech Ltd. recommends nitrile gloves. Do not use latex surgical gloves for protection. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

Eye protection: Use splash-proof goggles. Do not use safety glasses. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark red liquid.

Odor: Slight thymol odor.

Physical state: Liquid.

pH: 3.4 - 3.8.

Vapor pressure: Not determined.

Vapor density: Not determined.

Boiling point: Not determined.

Freezing point: Not determined.

Solubility in water: Complete.

Specific gravity: Not determined.

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: None.

Incompatibility with other materials: Strong oxidants.

Hazardous decomposition products: None.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

Acute effects: None known.

Chronic effects/carcinogenicity: No evidence of carcinogenicity.

12. ECOLOGICAL INFORMATION

No environmental information is known.

13. DISPOSAL CONSIDERATIONS

EZ Mucicarmine has no hazardous characteristics. Drain disposal is recommended with the permission of local wastewater treatment authorities.

Canadian disposal regulations generally parallel those in the United States.

Follow federal, state (provincial) and local regulations. Proper waste disposal is the generator's responsibility.

14. TRANSPORTATION INFORMATION

DOT (ground and air) and IATA: Not regulated.

15. REGULATORY INFORMATION

OSHA (USA): Under the Hazard Communication Standard and the Laboratory Standard, this product is a hazardous material: it is an irritant.

The OSHA Standards cited above mandate that exposed workers receive proper training in the properties of this product, work practices involved with its handling and disposal, and interpretation of its MSDS.

FDA (USA): EZ Mucicarmine is for in vitro diagnostic use as a stain in histology.

EPA (USA): EZ Mucicarmine is a reportable substance under SARA Title III.

16. OTHER INFORMATION

Label warnings: Avoid contact with eyes to prevent irritation. Avoid contact with skin to prevent staining.

NFPA (National Fire Protection Association) Rating:

General note: This rating is applicable only to safeguard the lives of individuals who may be concerned with fires occurring in an industrial plant or storage location. The ratings provide information to emergency personnel on whether to evacuate the area or how to perform control procedures. It is not descriptive of hazards under normal conditions of occupational use, and is even less applicable to anticipated laboratory-scale use.

Health 0: Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

Flammability 0: Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

Instability 0: Materials that are normally stable even under fire conditions.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: EZ GREEN

Catalog number: 873, 884D

General use: Green counterstain in histology.

Product description: Buffered, aqueous solution of Naphthol green B.

Manufacturer

Anatech Ltd.
1020 Harts Lake Road
Battle Creek, MI 49037
USA

Emergency contact information

Health:	Anatech Ltd.	800-262-8324	8 am - 5 pm ET, M-F
Transportation:	CHEMTREC	800-424-9300	24 hours

2. COMPOSITION AND INFORMATION ON INGREDIENTS

(Note: Percentage composition is withheld as a trade secret.)

<u>Component</u>	<u>CAS #</u>	<u>Exposure limits</u>
Naphthol green B (C.I. 10020)	19381-50-1	Not established.
Buffer	Proprietary	Not established; generally considered not hazardous.
Thymol	201-944-8	Not established.

3. HAZARDS IDENTIFICATION

Emergency overview

Green liquid.

Irritant to eyes. Not likely to pose a hazard under normal conditions of use.

Potential health effects

(Human health effects only.)

Primary route(s) of exposure: Eyes and skin.

Inhalation: Inhalation of vapors during normal conditions of use are not likely to present a health hazard.

Eye: Contact of liquid with eyes may cause irritation.

Skin: Brief contact with skin is nonirritating.

Ingestion: Effects are unknown but anticipated to be slight.

3. HAZARDS IDENTIFICATION (continued)

Chronic effects: None expected under anticipated conditions of use.

Signs and symptoms: Affected skin will be stained green. Eyes may water. Effects on the gastrointestinal tract may include discomfort and nausea.

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air if coughing or difficulty in breathing is experienced. Consult a physician if symptoms persist or worsen. Administer oxygen or artificial respiration as needed.

Eye: Flush eyes for at least 15 minutes in an eyewash station. If symptoms persist after washing, consult a physician.

Skin: Remove contaminated clothing, including footwear; wash before reuse or discard. For minor exposure, wash affected area with water and mild soap, rinsing thoroughly; apply a good quality skin lotion. In cases of prolonged, repeated or extensive exposure, rinse affected area or entire body for at least 15 minutes. For severe conditions, consult a physician.

Ingestion: Call a poison control center immediately. If victim is conscious, have him/her drink several glasses of water to dilute the solution. Induce vomiting only upon the advice of a physician or poison control authority.

5. FIRE FIGHTING MEASURES

Flammable properties

Flash point: > 200°F (> 93.3°C) closed cup.

Flammable limit: Not determined.

Autoignition temperature: Not determined.

Flammability classification: Class IIIB Combustible liquid (OSHA).

Flame propagation: None.

Hazardous products of combustion: Carbon oxides, nitrogen oxide and sulfur oxides.

Extinguishing media: ABC rated portable fire extinguishers should be used. Professional fire fighters may use water spray, dry chemical or carbon dioxide.

Fire fighting instructions: No special precautions are necessary.

6. ACCIDENTAL RELEASE MEASURES

Wear protective gloves, impermeable aprons and splash-proof goggles. Use a damp sponge or mop to remove spilled liquid. Wash contaminated area with water. Discard absorbents and other contaminated solids in a trash receptacle. Liquid waste may be discarded down the drain with approval by wastewater authorities, or may be removed by a licensed waste hauler.

Comply with all applicable governmental regulations on spill reporting and on the handling and disposal of hazardous waste.

7. HANDLING AND STORAGE

Handling: Wear a plastic or rubber apron, protective gloves and splash-proof goggles. Avoid contact with skin and eyes. Do not continue to wear contaminated clothing after a spill.

Storage: Store at room temperature.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Good general room ventilation is essential.

Personal protective equipment

Respiratory protection: None needed.

Skin protection: Anatech Ltd. recommends nitrile gloves. Do not use latex surgical gloves for protection. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

Eye protection: Use splash-proof goggles. Do not use safety glasses. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green liquid.

Odor: None.

Physical state: Liquid.

pH: 4.25 - 4.50.

Vapor pressure: Not determined.

Vapor density: Not determined.

Boiling point: Not determined.

Freezing point: Not determined.

Solubility in water: Complete.

Specific gravity: Not determined.

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: None.

Incompatibility with other materials: Strong oxidants.

Hazardous decomposition products: None.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

Acute effects: None known.

Chronic effects/carcinogenicity: No evidence of carcinogenicity.

12. ECOLOGICAL INFORMATION

No environmental information is known.

13. DISPOSAL CONSIDERATIONS

EZ Green has no hazardous characteristics. Drain disposal is recommended with the permission of local wastewater treatment authorities.

Follow federal, state (provincial) and local regulations. Proper waste disposal is the generator's responsibility. Canadian disposal regulations generally parallel those in the United States.

14. TRANSPORTATION INFORMATION

DOT (ground and air) and IATA: Not regulated.

15. REGULATORY INFORMATION

OSHA (USA): EZ Green is not a hazardous material.

FDA (USA): EZ Green is for in vitro diagnostic use as a stain in histology.

EPA (USA): EZ Green is a reportable substance under SARA Title III.

16. OTHER INFORMATION

Label warnings: Avoid contact with eyes to prevent irritation. Avoid contact with skin to prevent staining.

NFPA (National Fire Protection Association) Rating:

General note: This rating is applicable only to safeguard the lives of individuals who may be concerned with fires occurring in an industrial plant or storage location. The ratings provide information to emergency personnel on whether to evacuate the area or how to perform control procedures. It is not descriptive of hazards under normal conditions of occupational use, and is even less applicable to anticipated laboratory-scale use.

Health 0: Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

Flammability 0: Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

Instability 0: Materials that are normally stable even under fire conditions.

This Material Safety Data Sheet has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard. It conforms to the provisions of the American National Standards Institute (ANSI) Standard Z400.1 (Standard for the Preparation of Material Safety Data Sheets). Information contained herein was obtained from sources which Anatech Ltd. believes are reliable. It is the user's responsibility to determine suitability of the product for his/her own use, and to assure proper use and disposal of it to protect the safety and health of employees and the protection of the environment.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: WEIGERT HEMATOXYLIN SOLUTION A

Catalog number: 884A**General use:** Stock solution to prepare Weigert iron hematoxylin stain.**Product description:** Acidic solution of ferric chloride**Manufacturer**Anatech Ltd.
1020 Harts Lake Road
Battle Creek, MI 49037
USA**Emergency contact information**

Health:	Anatech Ltd.	800-262-8324	8 am - 5 pm ET, M-F
Transportation:	CHEMTREC	800-424-9300	24 hours

2. INGREDIENT INFORMATION

<u>Component</u>	<u>CAS #</u>	<u>Exposure limits</u>
Ferric chloride (1.2%)	10025-77-1	Not established. TLV = 1 mg/m ³ soluble iron salt as Fe (ACGIH)
Hydrochloric acid (1%)	7647-01-0	5 ppm (OSHA, NIOSH Ceiling)

3. HAZARDS IDENTIFICATION

Emergency overview

Rust colored liquid. Dilute solution of hydrochloric acid.

Eye and skin irritant. Not likely to pose a hazard under normal conditions of use.

Potential health effects (Human health effects only.)**Primary route(s) of exposure:** Eyes and skin.**Inhalation:** None expected under anticipated conditions of use.**Eye:** May cause irritation.**Skin:** May cause irritation.**Ingestion:** Effects anticipated to be minor.**Chronic effects:** None documented.**Signs and symptoms:** Affected skin will be stained yellow. Eyes may water and become red. Effects on the respiratory system may include coughing.

4. FIRST AID MEASURES

Inhalation: If inhaled, move the exposed person to fresh air at once. Other measures are usually unnecessary. Get medical attention if difficulty in breathing develops.

Eye: In case of contact, promptly wash the eyes with large amounts of water for 20 minutes, occasionally lifting the lower and upper lids. Get medical attention if any discomfort continues.

Skin: In case of contact, flush the contaminated skin with water. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water. With prolonged, repeated or extensive exposure, rinse affected area or entire body for at least 15 minutes. Get medical attention if skin irritation develops.

Ingestion: If swallowed, call a poison control center immediately.

5. FIRE FIGHTING MEASURES

Flammable properties

Flash point: None.

Flammable limit: None.

Autoignition temperature: Not applicable.

Flammability classification: Not applicable.

Flame propagation: None.

Hazardous products of combustion: None likely with this dilute solution.

Extinguishing media: ABC rated portable fire extinguishers should be used. Professional fire fighters may use water spray, dry chemical or carbon dioxide.

Fire fighting instructions: Sealed chemical suits and self contained breathing apparatuses are necessary for fighting fires involving substantial volumes of this product.

6. ACCIDENTAL RELEASE MEASURES

Wear protective gloves, impermeable aprons and splash-proof goggles. Use a disposable absorbent to remove spilled liquid. Discard absorbents and other contaminated solids in a trash receptacle. Liquid waste may be discarded down the drain with approval by wastewater authorities, or may be removed by a licensed waste hauler.

Comply with all applicable governmental regulations on spill reporting and on the handling and disposal of hazardous waste.

7. HANDLING AND STORAGE

Handling: Wear a plastic or rubber apron, protective gloves and splash-proof goggles. Avoid all contact with skin and eyes. Do not continue to wear contaminated clothing after a spill.

Storage: Store at room temperature.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Good general room ventilation is essential.

Personal protective equipment

Respiratory protection: None needed.

Skin protection: Use nitrile gloves. Do not use latex surgical gloves for protection. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

Eye protection: Use splash-proof goggles. Do not use safety glasses. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Rust colored liquid.

Odor: Slightly acidic.

Physical state: Liquid.

pH: 1.6.

Vapor pressure: Not determined.

Vapor density: Not determined.

Boiling point: Not determined.

Freezing point: Not determined.

Solubility in water: Complete.

Specific gravity: Not determined.

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: None.

Incompatibility with other materials: Bases.

Hazardous decomposition products: None likely with this dilute acid solution.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

No toxicological is known.

12. ECOLOGICAL INFORMATION

No environmental information is known.

13. DISPOSAL CONSIDERATIONS

Proper waste disposal is the generator's responsibility. Your local wastewater treatment plant authorities may permit drain disposal. Be sure to follow federal, state (provincial) and local regulations.

14. TRANSPORTATION INFORMATION

DOT (ground and air) and IATA: Not regulated.

15. REGULATORY INFORMATION

OSHA (USA): Under the Hazard Communication Standard and the Laboratory Standard, Weigert Hematoxylin Solution A is a hazardous material: it is an irritant.

FDA (USA): Weigert Hematoxylin Solution A is a general-purpose reagent for use in histology.

EPA (USA): Weigert Hematoxylin Solution A is a reportable substance under SARA Title III.

16. OTHER INFORMATION

Label warnings: Avoid contact with skin and eyes to prevent irritation.

NFPA (National Fire Protection Association) Rating:

General note: These ratings provide information of the hazards and severity of materials to emergency personnel. It is not descriptive of hazards under normal conditions of occupational use, and is even less applicable to anticipated laboratory-scale use.

Health 0: Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

Flammability 0: Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

Instability 0: Materials that are normally stable even under fire conditions.

This Material Safety Data Sheet has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard. It conforms to the provisions of the American National Standards Institute (ANSI) Standard Z400.1 (Standard for the Preparation of Material Safety Data Sheets). Information contained herein was obtained from sources that Anatech Ltd. believes are reliable. It is the user's responsibility to determine suitability of the product for his/her own use, and to assure proper use and disposal of it to protect the safety and health of employees and the protection of the environment.

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: WEIGERT HEMATOXYLIN SOLUTION B

Catalog number: 884B**General use:** Stock solution to prepare Weigert iron hematoxylin stain.

Product description: Alcoholic solution of hematoxylin.

Manufacturer

Anatech Ltd.
1020 Harts Lake Road
Battle Creek, MI 49037
USA

Emergency contact information

Health:	Anatech Ltd.	800-262-8324	8 am - 5 pm ET, M-F
Transportation:	CHEMTREC	800-424-9300	24 hours

2. INGREDIENT INFORMATION

<u>Component</u>	<u>CAS #</u>	<u>Exposure limits</u>
Ethanol (86%)	64-17-5	1000 ppm (OSHA, ACGIH 8 hr TWA)
Hematoxylin (1%)	517-28-2	Not established
Isopropanol (4.7%)	67-63-0	400 ppm (OSHA, NIOSH 8 hour TWA) 200 ppm (ACGIH 8 hour TWA) 400 ppm (ACGIH 15 minute STEL) 500 ppm (NIOSH 15 minute STEL)
Methanol (4.3%)	67-56-1	200 ppm (OSHA, NIOSH, ACGIH 8 hour TWA) 250 ppm (ACGIH Ceiling) 6000 ppm (NIOSH IDLH*) * Immediately dangerous to life and health

3. HAZARDS IDENTIFICATION

Emergency overview
<p>Flammable liquid. Transparent, brown colored liquid. Alcohol odor.</p> <p>Irritant. Toxic. It can be absorbed through the skin. Methanol is a systemic poison and cannot be made nonpoisonous. Inhalation of high concentrations of vapors may irritate respiratory tract and depress the central nervous system. Not likely to pose an inhalation threat under normal conditions of use.</p> <p>Ingestion, inhalation or absorption of high volumes may cause multiple systemic failures including blindness, gastrointestinal disturbances, liver, kidney and heart damage.</p>

Potential health effects (Human health effects only; animal effects in Section 11: Toxicological Information.)**Primary route(s) of exposure:** Eyes, skin and inhalation.

Primary route(s) of exposure (continued)

Inhalation: Inhalation of vapors during normal conditions of use is not likely to present a health hazard. Breathing a high concentration of vapors is likely to cause irritation to the mucous membranes. Toxic effects are observed on the central nervous system and especially the optic nerve. Symptoms include headache, drowsiness, nausea, vomiting and impaired vision. Systemic organ failures include the kidneys, liver and heart.

Eye: Contact of liquid with eyes will cause irritation.

Skin: Brief contact is not likely to produce adverse effects besides coloring of the skin. Methanol is a defatting solvent and extended contact of liquid with skin may cause irritation. Methanol is absorbed through the skin and shows health effects similar to inhalation effects.

Ingestion: Ingestion is likely to produce adverse effects on the gastrointestinal system and produce symptoms similar to inhalation.

Chronic effects: Prolonged or repeated exposure may cause dermatitis; liver, kidney, and heart damage; reproductive disorders and visual disturbances. However, none are expected under anticipated conditions of laboratory use.

Signs and symptoms: Affected skin will be stained blue-black and appear dry and cracked. Eyes may water and burn. Effects on the gastrointestinal tract include nausea and/or vomiting. Respiratory symptoms will present as central nervous system depression (dizziness, headache, incoordination) with coughing, difficulty in breathing and drowsiness.

4. FIRST AID MEASURES

Inhalation: If inhaled, move the exposed person to fresh air at once. Other measures are usually unnecessary. Get medical attention if difficulty in breathing develops.

Eye: In case of contact, promptly wash the eyes with large amounts of water for 20 minutes, occasionally lifting the lower and upper lids. Get medical attention if any discomfort continues.

Skin: In case of contact, flush the contaminated skin with water. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water. With prolonged, repeated or extensive exposure, rinse affected area or entire body for at least 15 minutes. Get medical attention if skin irritation develops.

Ingestion: If swallowed, call a poison control center immediately.

5. FIRE FIGHTING MEASURES**Flammable properties**

Flash point: 60°F (> 15.55°C) closed cup.

Flammable limit: Not determined.

Autoignition temperature: Not determined.

Flammability classification: Flammable liquid (OSHA).

Flame propagation: Vapors can travel to source of ignition and flash back to liquid if vapor temperature exceeds flash point.

Hazardous products of combustion: Carbon monoxide and carbon dioxide.

Extinguishing media: ABC rated portable fire extinguishers should be used. Professional fire fighters may use water spray, dry chemical or carbon dioxide.

Fire fighting instructions: Sealed chemical suits and self-contained breathing apparatuses are necessary for fighting fires involving substantial volumes of this product.

6. ACCIDENTAL RELEASE MEASURES

Flammable vapors are generated during a spill and may exceed OSHA's Permissible Exposure Limits. Wear protective gloves, rubber boots, impermeable aprons and full-face respirators. Use disposable absorbents to remove spilled liquid. Discard absorbents and other contaminated solids in a receptacle suitable for hazardous chemical waste. Liquid waste may be discarded down the drain with approval by wastewater authorities, or may be removed by a licensed waste hauler.

Comply with all applicable governmental regulations on spill reporting and on the handling and disposal of hazardous waste.

7. HANDLING AND STORAGE

Handling: Wear a plastic or rubber apron, protective gloves and splash-proof goggles. Avoid contact with skin and eyes. Do not continue to wear contaminated clothing after a spill.

Storage: Store at room temperature in a flammable storage cabinet.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls: Good general room ventilation is essential. Product should be used with local ventilation (fume hood).

Personal protective equipment

Respiratory protection: While none anticipated for expected laboratory use, a NIOSH-approved respirator suitable for organic vapors must be used if vapor levels exceed the exposure limits.

Skin protection: Use nitrile gloves. Do not use latex surgical gloves for protection. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

Eye protection: Use splash-proof goggles. Do not use safety glasses. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Transparent brown colored liquid.

Odor: Alcohol odor.

Physical state: Liquid.

pH: Not determined.

Vapor pressure: Not determined.

Vapor density: Not determined

Boiling point: Not determined.

Freezing point: Not determined.

Solubility in water: Complete.

Specific gravity: Not determined.

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: Heating this solution will give off irritating vapors. Solution is flammable; keep away from heat, sparks and flames.

Incompatibility with other materials: Strong oxidants.

Hazardous decomposition products: Carbon oxides when heated.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

The following data are from studies using 100% ethanol.

Acute eye effects: 500 mg administered into rabbit eyes for 24 hours produced moderate irritation.

Acute skin effects: Draize test on rabbit skin of 20 mg for 24 hours produced moderate irritation.

Acute oral effects: OSHA considers chemicals to be toxic if their LD₅₀ is at or below 500 mg/kg. LD₅₀ is the dose killing 50% of the test animals in a given time (usually 4 hours). LD₅₀ was 7,060 mg/kg in rats, 3,450 mg/kg in mice and 6,300 mg/kg in rabbits.

Acute inhalation effects: In man, ethanol produces severe toxic effects at 8,000 ppm and symptoms of illness at 2,000 ppm.

Chronic effects/carcinogenicity: Chronic ethanol ingestion is associated with liver cancer.

Teratology: None known.

Reproductive effects: Ethanol has been linked to birth defects in humans.

Mutagenicity: None known.

The following data are for studies using 100% methanol:

Acute eye effects: 40 mg of methanol administered into rabbit eyes in the standard Draize test produced moderate irritation.

Acute skin effects: 20 mg of methanol administered on rabbit skin in the standard Draize test (24 hours) produced moderate irritation.

Acute oral effects: OSHA considers chemicals to be toxic if their LD₅₀ is at or below 500 mg/kg. LD₅₀ is the dose killing 50% of the test animals in a given time (usually 4 hours). Using 100% methanol, the LD₅₀ was 7,300 mg/kg in mice, 14,200 mg/kg in rabbits and 5,628 mg/kg in rats.

Acute inhalation effects: In man, methanol produces severe toxic effects at 2,000 ppm and symptoms of illness at 500 ppm.

Target organs: Eyes, lungs, respiratory system, central nervous system and musculoskeletal system.

Carcinogenicity: No evidence of carcinogenicity.

Teratology: Fetotoxicity and developmental abnormalities have been reported in rat studies.

Reproductive effects: Positive paternal effects in rat (fertility) and mouse (spermatogenesis) studies.

Mutagenicity: Positive.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Toxicity threshold (cell multiplication inhibition test)

Data from studies using 100% ethanol.		
Bacteria	<i>Pseudomonas putida</i>	6,500 mg/l
Algae	<i>Microcystis aeruginosa</i>	1,450 mg/l
	<i>Scenedesmus quadricauda</i>	5,000 mg/l
Protozoa	<i>Entosiphon sulcatum</i>	65 mg/l
	<i>Uronema parduczi</i>	6,120 mg/l
Fish	Fingerling trout	24 hr LC ₅₀ : 11,200 mg/l, flow through system
	Cheek chub	LD ₀ : 24 hr in Detroit river water: 7,000 mg/l LD ₁₀₀ : 24 hr in Detroit river water: 9,000 mg/l LC ₅₀ > 7,000 mg/l
	Guppy	7 day LC ₅₀ = 11,050 mg/l
	Fathead minnow	Static bioassay in Lake Superior water at 18°C - 22°C (1, 24, 48, 72, 96 hours) > 18,000, 18,000, 13,480, 13,480, 13,480 mg/l respectively.
Biological Oxygen Demand (BOD), 5 day: = 37-74% ThOD Chemical Oxygen Demand (COD): = 90-97% ThOD Environmental fate: Ethanol is readily biodegradable.		

Data from studies using 100% methanol.		
Bacteria	<i>Pseudomonas putida</i>	6600 mg/l
	<i>Pseudomonas</i>	LD ₀ = 0.6 g/l
Algae	<i>Microcystis aeruginosa</i>	530 mg/l
	<i>Scenedesmus quadricauda</i>	8000 mg/l
	<i>Scenedesmus</i>	LD ₀ = 10 g/l
Protozoa	<i>Entosiphon sulcatum</i>	> 10,000 mg/l
	<i>Uronema parduczi</i>	> 10,000 mg/l
	<i>Colpoda</i>	LD ₀ = 1.25 g/l
Arthropoda	<i>Daphnia</i>	no effect at 10 g/l, 48 hr
	Brine shrimp	TL _m : 24 hr: 10,000 mg/l
Fish	Trout	TL _m : 48 hr: 8,000 mg/l
	Cheek chub	LD ₀ : 24 hr in Detroit river water: 8,000 mg/l, LD ₁₀₀ : 24 hr in Detroit river water: 17,000 mg/l
Biological Oxygen Demand (BOD), 5 day: = 48-53.4% ThOD Biological Oxygen Demand (BOD), 5 day: = 69-76% bio. ox. Environmental fate: Methyl alcohol is dangerous to aquatic life in high concentrations and is expected to biodegrade in soil and water very rapidly.		

13. DISPOSAL CONSIDERATIONS

Weigert Iron Hematoxylin Solution B is flammable and should be disposed via a licensed waste hauler. Proper waste disposal is the generator's responsibility. Local wastewater treatment authorities may permit drain disposal. Follow federal, state (provincial) and local regulations.

14. TRANSPORTATION INFORMATION

Packaging for hazardous shipments must meet the specifications as required by the current editions of International Air Transportation Association (IATA) Dangerous Goods Regulations and the United States Department of Transportation 49 CFR.

DOT (ground and air) and IATA: **Proper Shipping Name:** Flammable liquid, n.o.s. (ethanol)
UN #: 1993
Hazard Class: 3
Packing Group: II

15. REGULATORY INFORMATION

OSHA (USA): Under the Hazard Communication Standard and the Laboratory Standard, Weigert Hematoxylin Solution B is a hazardous material: it is an irritant, toxic and flammable.

The OSHA Standards cited above mandate that exposed workers receive proper training in the properties of this product, work practices involved with its handling and disposal, and interpretation of its MSDS.

FDA (USA): Weigert Hematoxylin Solution B is for in vitro diagnostic use as a general-purpose reagent in histology.

EPA (USA): Weigert Hematoxylin Solution B is a reportable substance under SARA Title III.

16. OTHER INFORMATION

Label warnings: Danger. Poison. Vapor harmful. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Flammable. Keep from heat and open flame. Use with adequate ventilation. Avoid contact with skin and eyes. If swallowed, get medical attention immediately.

NFPA (National Fire Protection Association) Rating:

General note: These ratings provide information of the hazards and severity of materials to emergency personnel. It is not descriptive of hazards under normal conditions of occupational use, and is even less applicable to anticipated laboratory-scale use.

Health 1: Materials that, under emergency conditions, can cause significant irritation.

Flammability 3: Materials that can be ignited under almost all ambient temperature conditions.

Instability 0: Materials that are normally stable even under fire conditions.

This Material Safety Data Sheet has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard. It conforms to the provisions of the American National Standards Institute (ANSI) Standard Z400.1 (Standard for the Preparation of Material Safety Data Sheets). Information contained herein was obtained from sources that Anatech Ltd. believes are reliable. It is the user's responsibility to determine suitability of the product for his/her own use, and to assure proper use and disposal of it to protect the safety and health of employees and the protection of the environment.