
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: 10% ACETIC ACID

Catalog number: 875, 882C

General use: Decolorizing solution used in histology procedures.

Product description: Aqueous solution of acetic acid.

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

Component

Acetic acid (10% v/v)

CAS #

64-19-7

Exposure limits

10 ppm (OSHA, NIOSH, ACGIH 8 hour TWA)
15 ppm (NIOSH, ACGIH 15 minute STEL)

3. HAZARDS IDENTIFICATION

Emergency overview

Colorless liquid.

Irritant to eyes and skin. Extensive, unprotected skin contact may cause dermatitis. Not likely to pose an inhalation threat under normal conditions of use. Ingestion is likely to cause adverse effects on gastrointestinal tract.

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. Pungent odor is irritating to nose, throat and lungs.

Eye: Contact of liquid with eyes may cause irritation.

Skin: Brief contact with skin is nonirritating. Prolonged contact can cause burns and dermatitis.

Ingestion: Effects are unknown but anticipated to be slight.

Chronic effects: None expected under anticipated conditions of use.

Signs and symptoms: 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 applicable.

Autoignition temperature: Not applicable.

Flammability classification: Class IIIB Combustible liquid (OSHA).

Flame propagation: None.

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: Self contained breathing apparatus 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 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: Colorless liquid.

Odor: Pungent.

Physical state: Liquid.

pH: 2.0-2.5.

Vapor pressure: Not determined.

Vapor density: Not determined.

Boiling point: Not determined.

Freezing point: Not determined.

Solubility in water: Complete.

Specific gravity: 1.01

10. STABILITY AND REACTIVITY

Chemical stability: Stable.

Conditions to avoid: None.

Incompatibility with other materials: Due to the dilute nature of the acetic acid, this product is very slightly reactive with oxidizing reagents, reducing agents, metals, acids and alkali.

Hazardous decomposition products: None.

Hazardous polymerization: None.

11. TOXICOLOGICAL INFORMATION

Acute effects: None known for dilute acetic acid. The following data are from studies using 100% acetic acid.

Man

Severe toxic effects: 200 ppm = 500 mg/cu m, 60 min.
Symptoms of illness: 40 ppm = 100 mg/cu m, 60 min.
Unsatisfactory: 20 ppm + 50 mg/cu m

Chronic effects/carcinogenicity: No evidence of carcinogenicity.

12. ECOLOGICAL INFORMATION

No environmental information is known for this dilution of acetic acid. The following data are from studies using 100% acetic acid.

Toxicity threshold (cell multiplication inhibition test):

Bacteria

Pseudomonas putida: 28,500 mg/l

Algae

Microcystis aeruginosa: 90 mg/l
Scenedesmus quadricauda: 4,000 mg/l

Protozoa

Entosiphon sulcatum: 78 mg/l
Uronema parduczi: 1,350 mg/l

Fish

Bluegill: 96 hr TL_m: 75 mg/l
Cheek chub: LD₀: 24 hr in Detroit river water: 100 mg/l
LD₁₀₀: 24 hr in Detroit river water: 200 mg/l
Goldfish: 20 hr, lethal at 423 mg/l
Fathead minnow: static bioassay in reconstituted water at 18°C - 22°C, pH≤5.9,
LC₅₀: (1, 24, 48, 72, 96 hours) 175, 106, 106, 79, 79 mg/l respectively.

13. DISPOSAL CONSIDERATIONS

10% acetic acid 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): 10% acetic acid is not a hazardous material.

FDA (USA): 10% acetic acid is for in vitro diagnostic use as an general purpose reagent in histology.

EPA (USA): 10% acetic acid is a reportable substance under SARA Title III.

16. OTHER INFORMATION

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

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.