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## MATERIAL SAFETY DATA SHEET

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Hp YELLOW

**Catalog number:** 869, 877, 882B

**General use:** Stain to demonstrate polysaccharides.

**Product description:** Aqueous solution of yellow dye and sulfurous acid; a Schiff-type reagent.

**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

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### 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>
N- (and/or N,N-) sulfinated, 3,6-diamino-10-methylacridinium dihydrochloride	None assigned	Not established.
N- (and/or N,N-) sulfinated, 3,6-diaminoacridinium dihydrochloride	None assigned	Not established.
Sulfurous acid	7782-99-2	5 ppm (OSHA 8 hour TWA) for sulfur dioxide 2 ppm (NIOSH, ACGIH 8 hour TWA) for sulfur dioxide 5 ppm (NIOSH, ACGIH 15 minute STEL) for sulfur dioxide
Hydrochloric acid	7647-01-0	5 ppm (OSHA, NIOSH Ceiling) 50 ppm (NIOSH IDLH*)

\* Immediately dangerous to life and health

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### 3. HAZARDS IDENTIFICATION

**Emergency overview**

Clear orange liquid.

Corrosive to skin, eyes and mucous membranes. Persons with allergies and/or asthma may exhibit hypersensitivity to sulfites.

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### 3. HAZARDS IDENTIFICATION (continued)

#### Potential health effects

(Human health effects only; animal effects in Section 11: Toxicological Information.)

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

**Inhalation:** Corrosive to mucous membranes. Inhalation may result in spasm, inflammation and edema of the upper respiratory system, chemical pneumonitis and pulmonary edema.

**Eye:** Contact of liquid or vapor with eyes may cause irritation or burns.

**Skin:** Prolonged contact of liquid with skin may cause irritation or burns.

**Ingestion:** Ingestion is corrosive to mucous membranes.

**Chronic effects:** None documented.

**Signs and symptoms:** Affected skin will be stained yellow. Eyes may water and become reddened. Effects on the respiratory system may include coughing. Persons with allergies and/or asthma may exhibit hypersensitivity to sulfites.

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### 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.

**Note to physician:** Solutions of sulfurous acid generate sulfur dioxide vapors which cause the corrosive properties of this product.

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### 5. FIRE FIGHTING MEASURES

#### Flammable properties

**Flash point:** None.

**Flammable limit:** None.

**Autoignition temperature:** Not determined.

**Flammability classification:** Not applicable.

**Flame propagation:** None.

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## 5. FIRE FIGHTING MEASURES (continued)

**Hazardous products of combustion:** Oxides of carbon, nitrogen and sulfur.

**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 apparatus are necessary for fighting fires involving substantial volumes of this product.

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## 6. ACCIDENTAL RELEASE MEASURES

The size of a spill is defined in part by the local situation, especially regarding ventilation. At room temperature in a well ventilated room, a few milliliters might be considered a small spill. Hazardous vapors are generated during a spill and may exceed Permissible Exposure Limits. Wear protective gloves, rubber boots, impermeable aprons and full-face respirators. Use a damp sponge or mop to remove spilled liquid. Wash contaminated area with water. Discard absorbents and other contaminated solids in a receptacle suitable for hazardous chemical waste. Liquid waste may be neutralized and discarded down the drain with approval by wastewater authorities, or may be removed by a licensed waste hauler.

With large spills, evacuate the area and have an emergency response team perform the cleanup. Have a licensed waste hauler remove contaminated solids and recovered liquid.

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

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## 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.

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## 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:** A NIOSH-approved respirator suitable for inorganic acid vapors must be used if vapor levels exceed the exposure limits. Above 20 ppm, a supplied air respirator is recommended by NIOSH.

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

**Eye protection:** Use of splash-proof goggles. Do not use safety glasses. If a face shield is worn as protection against biohazards, splash-proof goggles also must be used. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear orange liquid.

**Odor:** Pungent sulfurous odor.

**Physical state:** Liquid.

**pH:** 1.1 - 1.7.

**Vapor pressure:** Not determined.

**Vapor density:** Not determined.

**Boiling point:** Not determined.

**Freezing point:** Not determined.

**Solubility in water:** Complete.

**Specific gravity:** Not determined.

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## 10. STABILITY AND REACTIVITY

**Chemical stability:** Slowly evolves sulfur dioxide gas and decomposes, forming a conspicuous black precipitate. Keeping product in tightly closed container inhibits this process.

**Conditions to avoid:** Do not microwave this solution. Heating this solution will give off irritating and potentially life-threatening vapors.

**Incompatibility with other materials:** Strong oxidants, ammonia or chlorine bleach.

**Hazardous decomposition products:** None.

**Hazardous polymerization:** None.

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## 11. TOXICOLOGICAL INFORMATION

No toxicological data available.

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## 12. ECOLOGICAL INFORMATION

No environmental information is known.

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## 13. DISPOSAL CONSIDERATIONS

The corrosive properties of this solution can be neutralized with magnesium oxide. Some wastewater treatment authorities may grant permission for drain disposal of limited amounts of neutralized solution. Otherwise, waste product should be disposed of via a licensed waste hauler.

Canadian disposal regulations generally parallel those in the United States.

Regardless of the method chosen for disposal, be sure to follow federal, state (provincial) and local regulations. Proper waste disposal is the generator's responsibility.

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#### 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:** Corrosive liquid, n.o.s. (sulfite solution)  
**UN #:** 1760  
**Hazard Class:** 8  
**Packing Group:** II

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#### 15. REGULATORY INFORMATION

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

The two 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):** Hp Yellow is for in vitro diagnostic use as a stain in histology.

**EPA (USA):** Hp Yellow is corrosive and is a reportable substance under SARA Title III.

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#### 16. OTHER INFORMATION

**Label warnings:** Corrosive; may cause burns to skin and eyes. Vapor is irritating to eyes and respiratory system. Avoid breathing vapor; use with adequate ventilation. Avoid contact with skin and eyes.

##### **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 3: Materials that, under emergency conditions, can cause serious or permanent injury.

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.