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## MATERIAL SAFETY DATA SHEET

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<p><b>Product name: RE-FORM ASSAY KIT</b></p> <p><b>ITEM B: INDICATOR</b></p>
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**Catalog number:** 201

**General use:** Part of an assay kit to determine concentration of formaldehyde.

**Product description:** pH indicator in a propylene glycol ether 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

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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>
Orange IV	554-73-4	Not established.
Propylene glycol ether	034590-94-8	100 ppm (OSHA, NIOSH, ACGIH 8 hour TWA) 150 ppm (ACGIH 15 minute STEL)
Thymolphthalein	123359-43-3	Not established.

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### 3. HAZARDS IDENTIFICATION

<p><b>Emergency overview</b></p> <p>Orange liquid.</p> <p>Not likely to pose a hazard under normal conditions of use; mild irritation to eyes possible.</p>
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**Potential health effects**

(Human health effects only.)

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

**Inhalation:** None expected under anticipated conditions of use.

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

**Skin:** None expected under anticipated conditions of use.

**Ingestion:** Small amounts swallowed are not likely to cause any injuries.

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### 3. HAZARDS IDENTIFICATION (continued)

**Chronic effects:** Under intended conditions of use, chronic effects are not likely with the small quantity (15 ml) provided in each container.

**Signs and symptoms:** Eyes may water and become reddened.

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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.

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### 5. FIRE FIGHTING MEASURES

#### Flammable properties

**Flash point:** 175°F (79.4°C).

**Flammable limit:** Not determined.

**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:** 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

Use a damp sponge or other absorbent to remove spilled liquid. Wash affected area with water. Discard absorbents and other contaminated solids in a trash receptacle.

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:** No special precautions required.

**Storage:** Store at room temperature.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Engineering controls:** Good general room ventilation is essential.

### Personal protective equipment

**Respiratory protection:** Generally not needed with this small volume.

**Skin protection:** Generally not needed with this small volume, but protective gloves may be used if desired. An eyewash station and safety shower must be nearby, preferably in the same room, no more than 10 seconds away.

**Eye protection:** Generally not needed with this small volume, but splash proof goggles may be used if desired. 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:** Orange liquid.

**Odor:** Glycol ether.

**Physical state:** Liquid.

**pH:** Not determined.

**Vapor pressure:** 0.41 mm Hg @ 25°C

**Vapor density:** 5.14 (Air =1).

**Boiling point:** 374°F (190°C).

**Solubility in water:** Complete.

**Specific gravity:** 0.951 @ 25°C.

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## 10. STABILITY AND REACTIVITY

**Chemical stability:** Stable.

**Conditions to avoid:** None.

**Incompatibility with other materials:** Oxidizers.

**Hazardous decomposition products:** None.

**Hazardous polymerization:** None.

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## 11. TOXICOLOGICAL INFORMATION

**Acute eye effects:** None known.

**Acute skin effects:** OSHA considers chemicals to be toxic if their LD<sub>50</sub> is at or below 500 mg/kg. LD<sub>50</sub> is the dose killing 50% of the test animals in a given time (usually 4 hours). LD<sub>50</sub> for skin absorption in rabbits is 13,000-14,000 mg/kg.

**Acute oral effects:** OSHA considers chemicals to be toxic if their LD<sub>50</sub> is at or below 500 mg/kg. LD<sub>50</sub> is the dose killing 50% of the test animals in a given time (usually 4 hours). LD<sub>50</sub> was 5,220 mg/kg in rats.

**Acute inhalation effects:** None known.

**Chronic effects/carcinogenicity:** None known.

**Teratology:** None known.

**Reproductive effects:** None known.

**Mutagenicity:** None known.

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## 12. ECOLOGICAL INFORMATION

*Notropis atherinoides* (emerald shiner): acute LC<sub>50</sub> > 150 mg/L

*Pimephales promelas* (fathead minnow): acute LC<sub>50</sub> > 10,000 mg/L

*Daphnia magna* (water flea): acute LC<sub>50</sub> > 1,919 mg/L

Growth inhibition threshold (bacteria): 4168 mg/L

Growth inhibition green algae (*Selenastrum capricornutum*): EC<sub>50</sub> > 969 mg/L

Modified OECD Screening Test, 28 days: 72.9%

Biological Oxygen Demand (BOD), 20 day: 650 mg/g

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## 13. DISPOSAL CONSIDERATIONS

For this small volume, drain disposal is acceptable.

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.

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## 14. TRANSPORTATION INFORMATION

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

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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 an irritant. The OSHA Standards cited 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):** Not applicable.

**EPA (USA):** Re-Form Assay Kit Item B is a reportable substance under SARA Title III.

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## 16. OTHER INFORMATION

### **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 2: Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

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

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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.