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## Section I - Product Identification

*Product:* A solution of Toluidine blue O, acetic acid, basic fuchsin and methanol in water.

*Intended Uses:* This product is a general purpose laboratory reagent.

*Uses advised against:* For laboratory use only. Methyl alcohol is toxic and can not be made non-toxic.

### Manufacturer Identification

Medical Chemical Corp.  
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Torrance, CA 90501

Customer Service: Phone (310)787-6800  
Email: [Christinaavena@med-chem.com](mailto:Christinaavena@med-chem.com)  
FAX (310)787-4464

### Emergency Telephone Number

CHEMTREC Emergency Response Telephone Number: (800)424-9300. Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.



## Section II - Hazard Identification

This item is considered hazardous by 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Flammable liquid:** Category 2 (H225). Highly flammable liquid and vapor.

**Eye damage/eye irritation:** Category 2 (H319) Causes serious eye irritation.

**Acute toxicity (Oral):** Category 4 (H301). Toxic if swallowed.

**Acute toxicity (Inhalation):** Category 4 (H331). Toxic if inhaled.

**Acute toxicity (Dermal):** Category 4 (H311). Toxic in contact with skin.

**Specific target organ Toxicity:** single exposure: Category 1 (H370). Causes damage to organs.

**Signal word:** Danger

**Hazard statements:** Highly flammable liquid and vapor. Keep away from heat, sparks, open flames and hot surfaces. No smoking. Keep container tightly closed. Use only non-sparking tools. Take precautions against static discharge. Wear protective clothes and eye protection. In case of skin contact immediately remove all contaminated clothing. Rinse with water or shower. In case of fire, use fire extinguishers approved for alcohol fires.

### Precautionary statements

P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautions against static discharge.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective clothes and eye protection.

### Safety Ratings

*Health:* Hazardous *Flammability:* Highly Flammable *Reactivity:* None *Contact:* Hazardous

Recommended safety equipment: safety goggles, lab coat and proper gloves

### NFPA Ratings

Health = 2 Flammability = 4 Reactivity = 0

### Potential Health Effects

Exposure to excessive vapor causes eye irritation, head-ache, fatigue and drowsiness. High concen-

trations can produce central nervous system depression and optic nerve damage. 50,000 ppm will probably cause death in 1 to 2 hrs. Can be absorbed through skin. Swallowing may cause death or eye damage.

*Inhalation:* methyl alcohol is absorbed through the mucous membranes and will produce irritation as well as the same effects as ingestion.

*Ingestion:* Ingestion will produce CNS disturbance, dizziness, photophobia, headache, stupor, coma and death. Death has resulted from ingestion of as little as 30 ml of methanol.

*Skin contact:* Alcohols are absorbed through the skin. Repeated contact causes defatting of the skin with resultant irritation and flaking.

*Eye contact:* May be irritating.

*Chronic Exposure:* Unknown.

*Aggravation of preexisting conditions:* Impaired kidney and liver function may be aggravated by exposure to alcohols. Preexisting eye, skin, and respiratory conditions may also be aggravated. methyl alcohol has shown genetic toxicity in some animals.

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### Section III - Composition/Information on Components

Ingredients	CAS #	EC List Number	% w/w
Toluidine blue O	92-31-9	202-146-2	0.2%
Acetic acid	64-19-7	200-580-7	0.15%
Basic fuchsin	58969-01-0	684-520-9	0.08%
Methyl alcohol	67-56-1	200-659-6	20%

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### Section IV - First Aid Measures

*General Advice:* Contact a doctor if symptoms persist

*Inhalation:* Remove from source of exposure and get medical attention for any breathing difficulty.

*Ingestion:* Rinse mouth with water but do not induce vomiting. Aspiration of methanol into the lungs may produce death. If the patient is conscious administer two glasses of water to dilute the poison. Get immediate medical attention even if symptoms improve.

*Skin Contact:* In case of skin contact, remove contaminated clothing and flush with water. Wash affected area with soap and water. Get medical advice if irritation develops.

*Eye Contact:* In case of eye contact, flush with water for at least 15 minutes and get medical attention.

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### Section V - Fire Fighting Measures

*Fire Extinguishing Media:* Alcohol foam, carbon dioxide or dry chemical. Water is ineffective against alcohol fires but may be used to cool adjacent containers.

*Flash point:* 43 °C (109 °F) TCC

*Flammable Limits:* LEL 6% UEL 36.5%

*Specific Hazards:* Risk of vapor traveling to source of ignition and flashing back. Risk of exploding containers when heated. *Vapor in air may form explosion risk.*

*Special information:* Pyrolysis will release toxic carbon monoxide, formaldehyde and methyl alcohol.

*Special protective gear and precautions:* Self contained breathing apparatus and protective gear recommended.

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### Section VI - Accidental Release Measures

Use personal protective gear, remove all sources of ignition, absorb with a suitable absorbent and dispose. Take precautions against static ignition. Should not be released into the environment.

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### Section VII - Handling and Storage

P403+P233+P102; Store in a well-ventilated place. Keep container tightly closed. Store away from open flames or other sources of ignition. Keep out of reach of children.

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### Section VIII - Exposure Control/Personal Protection

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Toluidine blue O	Not regulated	Not regulated	Not regulated
Acetic acid	25 mg/m <sup>3</sup> TWA	25 mg/m <sup>3</sup> TWA	50 mg/m <sup>3</sup> TWA
Basic fuchsin	Not regulated	Not regulated	Not regulated
Methyl alcohol	200 ppm (skin)	200 ppm (skin)	6000 ppm

### Legend

**ACGIH:** American Conference of Governmental Industrial Hygienists.

**OSHA:** Occupational Safety and Health Administration.

**NIOSH:** National Institute for Occupational Safety and Health.

**IDLH:** Immediately dangerous to life or health.

*Ventilation System:* Local exhaust such as explosion proof chemical fume hoods are recommended. When required, Refer to the ACGIH document, "Industrial Ventilation, a Manual of Recommended Practices" for details about ventilation.

*Personal Respirator:* Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.

*Skin protection:* Protective gloves are recommended as part of good laboratory practice.

*Eye Protection:* Laboratory safety goggles or similar products are not required but recommended as part of good laboratory practice.

### Section IX - Physical and Chemical Properties

*Boiling Point:* 193 °F (90 °C)

*Density:* 0.97 g/ml @ 22.5 °C

*Vapor pressure (mm Hg):* No data

*Evaporation Rate (Water= 1):* 1

*Vapor Density (air = 1):* 1.1

*Solubility:* Miscible with water

*Appearance and Odor:* A clear purple liquid with the characteristic odor of methanol.

### Section X - Stability and Reactivity

*Stability:* Stable under normal conditions.

*Hazardous Decomposition Products:* Nothing unusual.

*Hazardous polymerization:* Will not occur.

*Incompatibilities:* Oxidizers.

*Conditions to avoid:* heat, flame and sources of ignition.

### Section XI - Toxicological Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Toluidine blue O	28 mg/kg (28 mg/kg)	No data	No data
Acetic acid	3.31 g/kg (Rat)	1.11 g/kg (Rabbit)	11.4 mg/l 4 h (Rat)
Basic fuchsin	No data	No data	No data
Methyl alcohol	5628 mg/kg (Rat)	15,800 mg/kg (Rabbit)	64,000 ppm/4h (Rat)

### Cancer lists

Ingredient	Known Carcinogenicity?	NTP?	Anticipated?	IARC Category
Toluidine blue O	No	No	No	None
Acetic acid	No	No	No	None
Basic fuchsin	No	Yes	Yes	2B
Methyl alcohol	No	No	No	None

### Section XII - Ecological Information

Aliphatic alcohols evaporate quickly and are not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption. The half-life for methanol in the atmosphere is one to ten days.

**Environmental Fate:** Biodegradable

**Soil Mobility:** Unknown

**Environmental Toxicity:** Low.

Component	Freshwater Fish	Water Flea	Freshwater algae
Toluidine blue O	No data	No data	No data
Acetic acid	LC50 1 g/l 96 h	EC50 > 301 mg/l 48 h	No Data
Basic fuchsin	No data	No data	No data
Methyl alcohol	LC50 >100 mg/l 96 h	EC50 >1000 mg/l 48 h	EC50 = 22 g/l 96 h

### Section XIII - Disposal Considerations

Incineration at a licensed chemical disposal facility is the preferred disposal method. Local governments often restrict the amounts of alcohol and other flammable liquids that may be flushed down the drain. The usual rule is that the effluent exiting the building can't be flammable. Dispose of contents and container in accord with all applicable regulations.

### Section XIV - Transportation Information

Not regulated

### Section XV - Regulatory Information

#### Chemical Inventory Status

<u>Ingredient</u>	<u>TSCA</u>	<u>EC</u>
Toluidine blue O	Yes	Yes
Acetic acid	Yes	Yes
Basic fuchsin	Yes	Yes
Methyl alcohol	Yes	Yes

#### Federal and State Regulations

<u>Ingredient</u>	<u>SARA 302</u>		<u>SARA 313</u>		<u>RCRA</u>	<u>TSCA</u>	
	<u>RQ</u>	<u>TPQ</u>	<u>List</u>	<u>Category</u>	<u>261.33</u>	<u>8(D)</u>	<u>Ca. Prop 65</u>
Toluidine blue O	No	No	No	No	No	No	Yes
Acetic acid	No	No	No	No	No	No	No
Basic fuchsin	No	No	No	No	No	No	No
Methyl alcohol	No	No	Yes	No	U154	No	Yes

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes

SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No Reactivity: No

 This product contains methyl alcohol which is known to the state of California to cause birth defects or other reproductive harm. For more information go to [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).

### Section XVI - Other Information

This information is believed to be correct at the time of publication but is not guaranteed as such, nor does it purport to be all inclusive. Medical Chemical Corp. assumes no liability for the accuracy or completeness of the information. The user assumes all responsibility for compliance with federal, state and local laws.

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