

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** Bluing Reagent Methanol  
**Product code:** 3356

**Supplier:** Astral Diagnostics Inc.  
800-441-0366 Technical Service  
Monday-Friday: 8:00 -5:00 PM

**Synonym:** None.  
**Material uses:** Laboratory Reagent.  
**Validation date:** 01/13/2014  
**In case of emergency:** 800-424-9300 CHEMTREC (USA)  
24 Hours/Day: 7 Days/Week

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Target Organs: Central nervous system, blood, liver, kidneys, and heart

**GHS Labeling: Pictograms**



**Signal word: Danger!**

**Hazard statement(s):**

**H226:** Flammable liquid and vapor (Cat 2)  
**H302:** Harmful if swallowed or in contact with skin (Cat 3)  
**H315:** Causes skin irritation (Cat 2)  
**H319:** Causes serious eye damage (Cat 1)  
**H332:** Harmful if inhaled (Cat 4)

**Precautionary statement(s):**

**P210:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources –No smoking-  
**P260:** Do not breath fumes/vapors  
**P261:** Avoid breathing fumes, or mist  
**P264:** Wash hands thoroughly after handling  
**P280:** Wear protective gloves/protective clothing/eye protection/face protection

**OSHA Hazards**

No known OSHA hazards.

**GHS Classification**

Respiratory sensitizer (Category 1), Skin sensitizer (Category 1), Germ cell mutagenicity (Category 1), Carcinogenicity (Category 1), Reproductive toxicity (2)

**NFPA**

Health Hazard: 2  
 Fire: 3  
 Reactivity: 0

**HMIS Classification**

Health Hazard: 2  
 Flammability: 3  
 Physical hazards: 0

**Potential Health Effects**

Inhalation – Causes respiratory tract irritation.

Skin – Causes skin irritation, may be absorbed through the skin.

Eyes – Causes eye irritation may cause painful sensitization to light

Ingestion – May be fatal or cause blindness if swallowed. Causes gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause liver and kidney damage. May cause cardiac disturbances. May cause central nervous system depression.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Name	CAS number	% v/v
Lithium Carbonate	100034-99-8	<1
Sodium Bicarbonate	144-55-8	<1
Methanol		50
Water	7732-18-5	Balance

**4. FIRST AID MEASURES**

- Eye contact:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**5. FIRE-FIGHTING MEASURES**

**Flammability of the product:** Flammable, FP 54°F

**Extinguishing media:** Water spray, dry chemical, CO2, and foam.

**Not suitable:** Do not use water jet.

**Special exposure hazards:** May emit toxic fumes under fire conditions.  
**Hazardous thermal**

**decomposition products:** Decomposition products may include the following materials:  
 Oxides of carbon

**Special protective equipment for fire-fighters:** Fire-fighters should wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in fire situation. Do not use direct water stream.

**Special remarks on explosion hazards:** Burns with invisible flame. LEL 6.7 UEL 36.5

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Spill:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

## 7. HANDLING AND STORAGE

**Handling:** Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use empty containers to retain product, residue can be hazardous. Do not reuse container.

**Storage:** Store in accordance with local regulations. Store in a segregated and approved area. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

**Methanol:**

**Exposure limits**

**ACGIH (United States, 1994). Absorbed through skin.**  
TWA: 262 mg/m<sup>3</sup>  
STEL: 328 mg/m<sup>3</sup>

**OSHA (United States, 1989). Absorbed through skin.**  
TWA: 260 mg/m<sup>3</sup>  
STEL: 325 mg/m<sup>3</sup>

**ACGIH TLV (United States, 1/2008). Absorbed through skin.**  
TWA: 200 ppm 8 hour(s).  
TWA: 262 mg/m<sup>3</sup> 8 hour(s).  
STEL: 250 ppm 15 minute(s).  
STEL: 328 mg/m<sup>3</sup> 15 minute(s).

**OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.**  
TWA: 200 ppm 8 hour(s).  
TWA: 260 mg/m<sup>3</sup> 8 hour(s).  
STEL: 250 ppm 15 minute(s).

STEL: 325 mg/m<sup>3</sup> 15 minute(s).  
**NIOSH REL (United States, 6/2008). Absorbed through skin.**  
TWA: 200 ppm 10 hour(s).  
TWA: 260 mg/m<sup>3</sup> 10 hour(s).  
STEL: 250 ppm 15 minute(s).  
STEL: 325 mg/m<sup>3</sup> 15 minute(s).  
**OSHA PEL (United States, 11/2006).**  
TWA: 200 ppm 8 hour(s).  
TWA: 260 mg/m<sup>3</sup> 8 hour(s).

- Engineering measures:** Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Personal protection**
- Respiratory:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: neoprene
- Eyes:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles
- Skin:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat
- Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid.	<b>Color:</b>	clear
<b>Flash Point:</b>	54°F	<b>Odor:</b>	Pungent odor
<b>pH:</b>	Not available.	<b>Boiling/condensation point:</b>	148°F
<b>Melting/freezing point:</b>	Not available.	<b>Relative density:</b>	Not available.
<b>Vapor pressure:</b>	Not available.	<b>Vapor density:</b>	1.11
<b>Odor threshold:</b>	Not available.	<b>Evaporation rate:</b>	>1
<b>VOC:</b>	50%		
<b>Solubility:</b>	Soluble in the following materials: water		

## 10. STABILITY AND REACTIVITY

**Chemical stability:** The product is stable.

**Possibility of hazardous reactions:**

Under normal conditions of storage and use, hazardous reactions will not occur.

**Hazardous polymerization:** Under normal conditions of storage and use, hazardous polymerization will not occur.

**Conditions to avoid:** Excessive heat, sparks

**Materials to avoid:** Strong oxidizers, chromic anhydride, perchloric acids, ect.

**Hazardous decomposition products:** Oxides of carbon

**Conditions of reactivity:** Under normal conditions of storage and use, hazardous reactions will not occur

## 11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure: Skin, Eyes, and Respiratory Tract

**Acute toxicity**

**Oral LD50**

Methyl alcohol- Rat, 5628 mg/kg

Sodium bicarbonate- Rat, 4220 mg/kg

Lithium carbonate- Rat, 525 mg/kg

**Inhalation LC50**

Methyl alcohol- Rat, 64000 ppm 4h

Lithium carbonate- Rat, 2.17 mg/L 4h

**Dermal LD50**

Methyl alcohol- Rabbit, 15800 mg/kg

**Other information on acute toxicity**

no data available

**Ingestion:** May be fatal or cause blindness if swallowed. Causes gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause liver and kidney damage. May cause cardiac disturbances. May cause central nervous system

**Skin:** Causes skin irritation, may be absorbed through the skin

**Inhalation:** Causes respiratory tract irritation.

**Eye Contact:** May cause eye irritation

**Carcinogenicity:** May cause cancer

**Mutagenicity:** May cause genetic defects

**Teratogenicity:** No known significant effects or critical hazards except possibly in laboratory animals.

**Reproductive:** Suspect of damaging fertility or the unborn child

## 12. ECOLOGICAL INFORMATION

**Toxicity**

<u>Result</u>	<u>Species</u>	<u>Period</u>
Daphia Magna (EC50)	48 hour/hours	>10000 mg/l
Oncorhynchus myKiss (EC50)	48 hour/hours	13200 mg/l
Lepomis Macrochirus (EC50)	48 hour/hours	16000 mg/l
Daphia Magna (LC50)	96 hour/hours	>100 mg/l
Pimephales Promelas (LC 50)	96 hour/hours	>100 mg/l
Lepomis Macrochirus (LC50)	96 hour/hours	15400 mg/l

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

**13. DISPOSAL CONSIDERATIONS**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****Land Transport DOT (US)**

UN No.	UN1230
Proper Shipping Name	Methanol Solution
Hazard Class	3
Packing Group	II

**TDG**

UN No.	UN1230
Proper Shipping Name	Methanol Solution
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	II

**IATA**

UN No.	UN1230
Proper Shipping Name	Methanol Solution
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	II

**IMDG/IMP**

UN No.	UN1230
Proper Shipping Name	Methanol Solution
Hazard Class	3
Subsidiary Hazard Class	6.1
Packing Group	II

**15. REGULATORY INFORMATION****United States**

**HCS Classification:** Flammable liquid, Highly toxic material, Irritating material, Target organ effects

**U.S. Federal regulations:** **TSCA 8(a) IUR:** Partial exemption  
**United States inventory (TSCA 8b):**

Listed on inventory.

**SARA 302/304/311/312 extremely hazardous substances:** No products were found.

**SARA 302/304 emergency planning and notification:** No products were found.

**SARA 302/304/311/312 hazardous chemicals:** Methanol

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**

Methanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

**Clean Air Act (CAA) 112 accidental release prevention:** No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

**DEA List I & II Chemicals  
(Precursor Chemicals):**

Not listed

**SARA 313**

**Form R - Reporting  
Requirements:**

Product name	CAS number	Concentration
Methanol	64-17-5	50%

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

**RTK:** Methanol, CAS 67-56-1, Listed, CT, MA, MN, NJ, RI

**California Prop 65**

**Warning:** This product contains methanol a product in the state of CA which may cause cancer or birth defects

**WHMIS (Canada):**

Class B-2: Flammable Liquid  
Class D-1A: Material causing immediate and serious toxic effects (Very toxic).  
Class D-2B: Material causing other toxic effects (Toxic).

**Canadian lists:**

**CEPA Toxic substances:** None of the components are listed.  
**Canadian ARET:** None of the components are listed.  
**Canadian NPRI:** None of the components are listed.  
**Alberta Designated Substances:** None of the components are listed.  
**Ontario Designated Substances:** None of the components are listed.  
**Quebec Designated Substances:** None of the components are listed.

**CEPA DSL / CEPA NDSL:**

All components are listed or exempted.

**CERCLA:**

Methyl Alcohol: RQ 5000 lb

*This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.*

**International regulations**

**International lists:**

**Australia inventory (AICS):** All components are listed or exempted.  
**China inventory (IECSC):** All components are listed or exempted.  
**Japan inventory:** Not determined.  
**Korea inventory:** Not determined.  
**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.  
**Philippines inventory (PICCS):** All components are listed or exempted.

**16. OTHER INFORMATION**



**Notice to reader**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Astral Diagnostics Inc. shall not be liable for any damage resulting from handling of contact with this product.