

BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: Tri•Dip™ Solution A	Code: 5692/5699
Supplier: BBC Biochemical	MSDS#: 5692/5699
Synonym:	Validation Date: 5-11-09
Trade Name: None	Print Date: 5-11-09
Material Uses:	Responsible Name: Dr.B
Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477

Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	OSHA PEL/ACGIH TLV
1) Methyl Alcohol	67-56-1	>95%	200 ppm/200 ppm
2) Selected Buffers	N/A	<5%	

Section 3. Hazards Identification

Physical State and Appearance	Colorless liquid.
Emergency Overview	Poison! Flammable! May be fatal or cause blindness if swallowed. Avoid prolonged breathing of vapors. Avoid contact with eyes and skin.
Routes of Entry	Eyes, mouth, skin.
Potential Acute Health Effects	
Eyes	Liquid or vapor may cause eye irritation.
Skin	Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation or dermatitis (rash).
Inhalation	Excessive exposure to this product may cause headache, CNS depression, drowsiness, dizziness, loss of appetite, irritation of the respiratory tract, drunkenness, unconsciousness, or death.
Ingestion	Poisonous! May be fatal or cause blindness if swallowed. Ingestion may have a narcotic effect including signs of CNS depression such as dizziness, headache, drowsiness, loss of coordination, and fatigue.
Potential Chronic Health Effects	
Medical Conditions Aggravated by Overexposure	Preexisting eye, skin and respiratory conditions may be aggravated by exposure to this product.
Overexposure/Signs/Symptoms	Shortness of breath, confused behavior, redness of skin, swelling of tissues, watery eyes, and nausea.

Section 4. First Aid Measures

Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.
Skin Contact	Wash area thoroughly with copious amounts of water. Remove contaminated clothing and clean before wearing again.
Inhalation	Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do not give liquids if victim is unconscious or drowsy. Otherwise, give two glasses of water. Do not induce vomiting. Call doctor.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Not available.
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Auto-ignition Temperature	Not available.
Flash Points	52° F
Flammable Limits	LEL: 6.00%; UEL: 36.00%
Products of Combustion	Not available.
Fire Hazards in Presence Of Various Substances	Not available.
Explosion Hazards in Presence of Various Substances	Not available.
Fire Fighting Media and Instructions	"Alcohol" foam, dry chemical, or CO ² . Clear fire area of unprotected personnel. Cool fire exposed containers with water.
Protective Clothing (Fire)	Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved SCBA.
Special Remarks on Fire Hazards	When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mist or spray may be flammable at temperatures below the flash point.
Special Remarks on Explosion Hazards	Carbon monoxide and unidentified organic compounds may be formed during combustion.

Section 6. Accidental Release Measures

Small Spill and Leak	Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.
Large Spill and Leak	Same as above.

Section 7, Handling and Storage

Handling	Surfaces that are hot may ignite liquid even in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.
Storage	Keep away from heat, sparks, and flame. Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.

Section 8. Exposure Controls / Personal Protection

Engineering Controls	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Personal Protection	
Eyes	Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.
Body	Wear impervious protective clothing if there is a potential for skin contact.
Respiratory	If exposure exceeds occupational exposure limits use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.
Hands	Neoprene, Nitrile or natural rubber gloves.
Feet	Impervious footwear.
Personal Protection in Case of a Large Spill	
Product Name	Exposure Limits
1) Methyl Alcohol	OSHA PEL 200ppm
2)	
3)	
Consult Local authorities before acceptable exposure limits.	

Section 9. Physical and Chemical Properties

Physical State and Appearance	Colorless liquid.	Odor:	Mild odor.
Molecular Weight	32.04	Taste:	Not available.
Molecular Formula	Not applicable.	Color:	Colorless.
pH (1%/Water)	Not applicable.		
Boiling/Condensation Point	Not applicable.		
Melting/Freezing Point	-144°F/Not applicable.		
Critical Temperature	Not applicable.		
Specific Gravity	0.79		
Vapor Pressure	96 mmHg. @ 20°C		

Vapor Density	Heavier than air.
Volatility	100%
Odor Threshold	Not applicable.
Evaporation Rate	Slower than ether.
VOC	Not available.
Viscosity	Not available.
Ionicity (in water)	Not available.
Dispersion Properties	Not available.
Solubility	Soluble in water.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	Stable.
Conditions of Instability	Avoid heat, flame, and other sources of ignition.
Incompatibility with Various Substances	Strong oxidizers.
Hazardous Decomposition Products	None.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	Poison. May be fatal or cause blindness if swallowed. Cannot be made unpoisonous.
Other Toxic Effects on Humans	Methyl alcohol is listed as a toxic chemical on the SARA Title III, Sec. 313 list. For Sec. 311/312 reporting, methyl alcohol is listed as an immediate (acute) health hazard, and a fire hazard. None of the chemicals in this product are found on the extremely hazardous substance list.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Not available.

Section 12. Ecological Information

Ecotoxicity	Not available.
BODS and COD	Not available.
Biodegradable/OEDC	Not available.
Mobility	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on The Products of Biodegradation	Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

Section 13. Disposal Considerations

Waste Information	Not available.
Waste Stream	Not available.
Consult your local or regional authorities.	

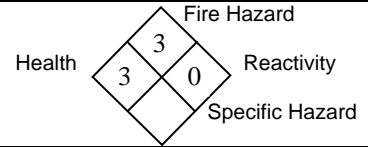
Section 14. Transport Information

DOT Classification	Flammable liquid. UN1230, Methanol, 3, II
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
TDG Classification	Flammable liquid. UN1230, Methanol, 3, II
ADR/RID Classification	ADR (Europe) Information not available.

IMO/IMDG Classification	IMDG Information not available.
ICAO/IATA Classification	See IATA Regulations, Flammable liquid, UN1230, Methanol, 3, II

Section 15. Other Information

Label requirements			
Hazardous Material Information System (U.S.A.)	Health	3	National Fire Protection Association (U.S.A.)
	Fire Hazard	3	
	Reactivity	0	
	Personal Protection		



References
Other Special Considerations

Notice to Reader
 To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: TriDip™ Solution B	Code: 5694/5700
Supplier: BBC Biochemical	MSDS#: 5694/5700
Synonym: None	Validation Date: 5-11-09
Trade Name: None	Print Date: 5-11-09
Material Uses: Histology Staining	Responsible Name: Dr. B
Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477

Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	OSHA PEL/TWA	/STEL
1) Distilled Water	7732-18-5	NOTE: Percent composition withheld as a trade secret.	200 ppm	250 ppm
2) Eosin Y	17372-87-1			
3) Selected Buffers	N/A			

Section 3. Hazards Identification

Physical State and Appearance	Colorless liquid.
Emergency Overview	Not available.
Routes of Entry	Eye contact, inhalation, ingestion, skin contact.
Potential Acute Health Effects	
Eyes	Irritation, may cause vision impairment or permanent damage.
Skin	Irritation. Can be toxic by skin absorption.
Inhalation	Affects central nervous system, especially the optic nerve.
Ingestion	May produce blindness.
Potential Chronic Health Effects	Chronic exposure may also cause damage to the liver, kidneys and Central Nervous System.
Medical Conditions Aggravated by Overexposure/Overexposure/Signs/Symptoms	Skin conditions, eye problems, or impaired liver or kidney function.

Section 4. First Aid Measures

Eye Contact	Immediately flush thoroughly with water for at least 15 minutes.
Skin Contact	Wash area thoroughly with copious amounts of water. Remove contaminated clothing and clean before wearing again.
Inhalation	Remove to fresh air; give artificial respirations if breathing has stopped.
Ingestion	Get immediate medical attention. If medical attention is not immediately available, give water to drink. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable liquid.
Auto-ignition Temperature	Not available.
Flash Points	N/A
Flammable Limits	Not available.
Products of Combustion	Not available.

Fire Hazards in Presence Of Various Substances Not available.

Explosion Hazards in Presence of Various Substances Not available.

Fire Fighting Media and Instructions
Protective Clothing (Fire)

Special Remarks on Fire Hazards
Special Remarks on Explosion Hazards

Section 6. Accidental Release Measures

Small Spill and Leak Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Section VIII. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Waste Disposal Method. Comply with Federal, State, and local regulations on reporting releases.

Large Spill and Leak Same as above.

Section 7, Handling and Storage

Handling Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Electrically ground all equipment handling this product. Material must be handled or transferred in an approved fume hood or with adequate ventilation.

Storage Keep container tightly closed. Store away from heat, sparks, open flame, oxidizers.

Section 8. Exposure Controls / Personal Protection

Engineering Controls Engineering and/or administrative controls should be implemented to reduce exposure.

Personal Protection

- Eyes** Safety glasses with side shields must be worn at all times.
- Body** Impervious clothing must be worn to prevent skin contact.
- Respiratory** If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety supplier).
- Hands** Butyl rubber, Vitron or equivalent.
- Feet** Impervious footwear should be worn to prevent skin contact.

Personal Protection in Case of a Large Spill See above.

Product Name **Exposure Limits**

- 1)
- 2)
- 3)

Consult Local authorities before acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Colorless liquid.	Odor:	Not available.
Molecular Weight	Not applicable.	Taste:	Not available.
Molecular Formula	Not applicable.	Color:	None.
pH (1%/Water)	Not applicable.		
Boiling/Condensation Point	Not applicable.		
Melting/Freezing Point	Not applicable.		
Critical Temperature	Not applicable.		
Specific Gravity	Not applicable.		
Vapor Pressure	97		
Vapor Density	Not applicable.		
Volatility	Not applicable.		
Odor Threshold	Not applicable.		
Evaporation Rate	Not applicable.		
VOC	Not available.		
Viscosity	Not available.		

Ionicity (in water)	Not available.
Dispersion Properties	Not available.
Solubility	Miscible in water.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	Stable.
Conditions of Instability	Heat, contact with ignition sources.
Incompatibility with Various Substances	Oxidizers.
Hazardous Decomposition Products	CO ₂
Hazardous Polymerization	Does not occur.

Section 11. Toxicological Information

Toxicity to Animals	Methanol 67-56-1 LD50: orl-rat 5628 mg/kg; skn-rbt 15800 mg/kg LC50: ihl-rat 64000 ppm/4H LDLo: orl-hmn 143 mg/kg
Chronic Effects on Humans	
Other Toxic Effects on Humans	
Special Remarks on Toxicity to Animals	Tests on laboratory animals indicate methanol may produce adverse mutagenic and reproductive effects. Cited in Registry of Toxic Effects of Substances (RTECS).
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Not available.

Section 12. Ecological Information

Ecotoxicity	Not available.
BODS and COD	Not available.
Biodegradable/OEDC	Not available.
Mobility	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on The Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Not available.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Not hazardous.
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
TDG Classification	Not controlled under TDG (Canada).
ADR/RID Classification	Not controlled under ADR (Europe).
IMO/IMDG Classification	Not controlled under IMDG.
ICAO/IATA Classification	Not controlled under IATA.

Section 15. Other Information

Label requirements

Hazardous Material Information System (U.S.A.)	Health	2	National Fire Protection Association (U.S.A.)	<p>The diagram is a diamond shape divided into four quadrants. The top quadrant is labeled 'Fire Hazard' and contains the number '1'. The bottom quadrant is labeled 'Reactivity' and contains the number '0'. The left quadrant is labeled 'Health' and contains the number '2'. The right quadrant is labeled 'Specific Hazard' and contains the number '0'.</p>
	Fire Hazard	1		
	Reactivity	0		
	Personal Protection			

References

Other Special Considerations

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BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: Tri Dip™ Kit Solution C	Code: 5692
Supplier: BBC Biochemical	MSDS# 5692
Synonym: None	Validation Date: 5-11-09
Trade Name: None	Print Date: 5-11-09
Material Uses: Histology Staining	Responsible Name: Dr. B
Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477

Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	OSHA PEL/ TWA	/STEL
1) DI Water	7732-18-5	NOTE: Percent composition withheld as a trade secret.	200 ppm 10 mg/m ³	250 ppm
2) Methanol	67-56-1			
3) Glycerin	56-81-5			
4) Giemsa Stain	51811-82-6			
5) Selected Additives				

Section 3. Hazards Identification

Physical State and Appearance	Dark blue liquid.
Emergency Overview	Not available.
Routes of Entry	Eye contact, inhalation, ingestion, skin contact.
Potential Acute Health Effects	
Eyes	Irritation may cause vision impairment or permanent damage.
Skin	Irritation can be toxic by skin absorption.
Inhalation	Toxic. Exposure may also cause damage to liver, kidneys and Central Nervous System, especially the optic nerve.
Ingestion	Toxic. May produce blindness, may be fatal.
Potential Chronic Health Effects	
Medical Conditions Aggravated by Overexposure/Overexposure/Signs/Symptoms	Skin conditions, eye problems, or impaired liver or kidney function.

Section 4. First Aid Measures

Eye Contact	Immediately flush thoroughly with water for at least 15 minutes.
Skin Contact	Wash area thoroughly with copious amounts of water. Remove contaminated clothing and clean before wearing again.
Inhalation	Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion	Get immediate medical attention. If medical attention is not immediately available, give water to drink. Do not induce vomiting unless directed to do so by medical personnel.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Not available.
Auto-ignition Temperature	Not available.
Flash Points	Not available.

Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence Of Various Substances	Not available.
Explosion Hazards in Presence of Various Substances	Not available.
Fire Fighting Media and Instructions	"Alcohol" foam, CO ₂ , Dry chemical
Protective Clothing (Fire)	Wear self-contained breathing apparatus and protective clothing.
Special Remarks on Fire Hazards	
Special Remarks on Explosion Hazards	

Section 6. Accidental Release Measures

Small Spill and Leak	Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Section VIII. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Waste Disposal Method. Comply with Federal, State, and local regulations on reporting releases.
Large Spill and Leak	Same as above.

Section 7, Handling and Storage

Handling	Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Electrically ground all equipment handling this product. Material must be handled or transferred in an approved fume hood or with adequate ventilation.
Storage	Keep container tightly closed. Store away from heat, sparks, open flame, oxidizers.

Section 8. Exposure Controls / Personal Protection

Engineering Controls	Engineering and/or administrative controls should be implemented to reduce exposure.
Personal Protection	
Eyes	Safety glasses with side shields must be worn at all times.
Body	Impervious clothing must be worn to prevent skin contact.
Respiratory	If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety supplier).
Hands	Butyl rubber, Vitron or equivalent.
Feet	Impervious footwear should be worn to prevent skin contact.
Personal Protection in Case of a Large Spill	See above.
Product Name	Exposure Limits
1)	
2)	
3)	
Consult Local authorities before acceptable exposure limits.	

Section 9. Physical and Chemical Properties

Physical State and Appearance	Dark blue liquid.	Odor:	Alcoholic.
Molecular Weight	Not applicable.	Taste:	Not available.
Molecular Formula	Not applicable.	Color:	Dark blue.
pH (1%/Water)	Not applicable.		
Boiling/Condensation Point	Not applicable.		
Melting/Freezing Point	Not applicable.		
Critical Temperature	Not applicable.		
Specific Gravity	Not applicable.		
Vapor Pressure	Not applicable.		
Vapor Density	Not applicable.		
Volatility	Not applicable.		
Odor Threshold	Not applicable.		
Evaporation Rate	Not applicable.		
VOC	Not available.		

Viscosity	Not available.
Ionicity (in water)	Not available.
Dispersion Properties	Not available.
Solubility	Miscible in water.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	Stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Acids, oxidizers, reactive metals.
Hazardous Decomposition Products	CO _x , Formaldehyde.
Hazardous Polymerization	Does not occur.

Section 11. Toxicological Information

Toxicity to Animals	Not available.
Chronic Effects on Humans	
Other Toxic Effects on Humans	
Special Remarks on Toxicity to Animals	
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Not available.

Section 12. Ecological Information

Ecotoxicity	Not available.
BODS and COD	Not available.
Biodegradable/OEDC	Not available.
Mobility	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on The Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Not available.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Not hazardous.
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
TDG Classification	Not controlled under TDG (Canada).
ADR/RID Classification	Not controlled under ADR (Europe).
IMO/IMDG Classification	Not controlled under IMDG.
ICAO/IATA Classification	Not controlled under IATA.

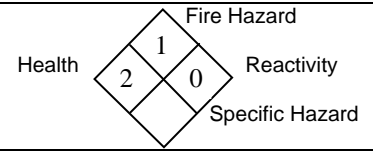
Section 15. Other Information

Label requirements

Hazardous Material Information System (U.S.A.)

Health	2
Fire Hazard	1
Reactivity	0
Personal Protection	

National Fire Protection Association (U.S.A.)



References

Other Special Considerations

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