



Date Issued: February 16, 2011  
Supersedes Date: 1/4/2011

## MATERIAL SAFETY DATA SHEET

### Section 1: Chemical Product and Company Identification

Cat#: SPS-GE  
Part Name: 5% Alcoholic Hematoxylin Soln. A  
Supplier: Triangle Biomedical Sciences, Inc. (TBS)  
3014 Croasdaile Drive  
Durham, NC 27705  
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

### Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	% in product
1	2-Propanol	000067630	2.5
2	Ethyl alcohol	000064175	90
3	Hematoxylin	000517282	5
4	Methanol	000067561	2.5

#### OSHA (ACGIH) Exposure Limits

CAS#	Name	IDLH	TWA		STEL		CEILING	
			ppm	mg/	ppm	mg/m3	ppm	mg/m3
CAS#: 000064175	OSHA	IDLH: --	Not classifi	--	--	--	--	--
	ACGIH		1000	1884	--	--	--	--
CAS#: 000067561	OSHA	IDLH: 6,000	ACGIH;CA	260	--	--	--	--
	ACGIH		200	262	250	250	--	--
CAS#: 000067630	OSHA	IDLH: 2,000	CANADA	980	--	--	--	--
	ACGIH		400	983	500	500	--	--
CAS#: 000517282	OSHA	IDLH: NE	NE	NE	NE	NE	NE	NE
	ACGIH		NE	NE	NE	NE	NE	NE

NA = not applicable      NL = not listed      NE = not established      NNR = not normally required

**Section 3: Hazards Identification**

Causes eye irritation.

Flammable liquid and vapor.

Harmful if swallowed.

May cause target organ or system damage - liver.

Poison. May be fatal or cause blindness if swallowed.

Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
1	3	0

**Section 4: First Aid Measures**

Contact medical personnel.

Flush eyes with flowing water for at least 15 minutes.

If swallowed, induce vomiting as directed by medical personnel.

Separate eyelids with finger tips.

Wash skin with deluge of water for at least 15 minutes.

**Section 5: Fire Fighting Measures**

Flash point, deg F.: 55

Method: TCC

UEL: no data      LEL: no data

Autoignition temperature, deg. F.: no data

Flammability Classification: IB

Flame Propagation Rate: no data

Hazardous Combustion Products: none

**Section 6: Accidental Release Measures**

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Absorb liquids on absorbent material.

Remove ignition sources.

Ventilate the area.

**Section 7: Handling and Storage**

Store at room temp

**Section 8: Exposure Controls/ Personal Protection**

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

Use process enclosures, local exhaust ventilation, or other engineering controls.

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NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**Section 9: Physical and Chemical Properties**

Formula: mixture vapor pressure: 44.6 mm Hg @ 20 C  
Formula Weight: nap vapor density: 1.6  
boiling point: 173 Specific gravity: 0.7945  
melting point: -173 F ph: no data  
solubility: 100% appearance: clear colorless liquid

**Section 10: Stability and Reactivity**

Chemical Stability stable  
Conditions to Avoid: none  
Incompatibility with other materials: none  
Hazardous Decomposition Products: none  
Hazardous Polymerization: will not occur

**Section 11: Toxicological Information**

Acute Data: no data  
Subchronic data: no data

**Section 12: Ecological Information**

no data

**Section 13: Disposal Considerations**

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
000064175	not listed	not listed
000067561	U154	Methyl alcohol
000067630	not listed	not listed
000517282	not listed	not listed

**Section 14: Transportation Data**

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

**UN Number:** 1987

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NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**Section 15: Regulatory Information**

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
000064175	no	no
000067561	Yes	no
000067630	no	no
000517282	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#						
000064175	FL	MA	MN	PA	WA	
000067561	FL	MA	MN	NJ	PA	WA
000067630	FL	MA	MN	NJ	PA	WA
000517282	not listed					

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.	
000064175	not listed	not listed	not listed	
000067561	Methanol	1.0	not listed	
000067630	Isopropyl alcohol (manufacturing-strong acid process, no sup	1.0		not
000517282	not listed	not listed	not listed	

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of

SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
000064175	not listed	not listed	not listed
000067561	not listed	not listed	not listed
000067630	not listed	not listed	not listed
000517282	not listed	not listed	not listed

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**CERCLA**

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
000064175	Not listed	Not listed
000067561	Not listed	Not listed
000067630	Not listed	Not listed
000517282	Not listed	Not listed

**Section 16: Other Information**

**TRIANGLE BIOMEDICAL SCIENCES (TBS)** provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. TBS makes no representation or warranties, either expressed or implied of merchantability, fitness for particular purposes with respect to the information set forth herein or to which the information refers. Accordingly, TBS will not be responsible for damages resulting from the use of or reliance upon this information.

**END OF MSDS**

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NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

Date Issued: February 16, 2011  
Supersedes Date: 1/4/2011

## MATERIAL SAFETY DATA SHEET

### Section 1: Chemical Product and Company Identification

Cat#: SPS-GE  
Part Name: Iodine Solution Soln. C  
Supplier: Triangle Biomedical Sciences, Inc. (TBS)  
3014 Croasdaile Drive  
Durham, NC 27705  
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

### Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	% in product
1	Iodine	007553562	1
2	Potassium iodide	007681110	2
3	Water	007732185	97

### OSHA (ACGIH) Exposure Limits

CAS#	Name	IDLH	TWA		STEL		CEILING	
			ppm	mg/	ppm	mg/m3	ppm	mg/m3
007553562	Iodine	2	Not classifi	--	--	--	0.1	1
	OSHA							
	ACGIH		--	--	--	--	0.1	1
007681110	Potassium iodide	NE	NE	NE	NE	NE	NE	NE
	OSHA		NE	NE	NE	NE	NE	NE
	ACGIH		NE	NE	NE	NE	NE	NE
007732185	Water	NE	NE	NE	NE	NE	NE	NE
	OSHA		NE	NE	NE	NE	NE	NE
	ACGIH		NE	NE	NE	NE	NE	NE

### Section 3: Hazards Identification

Causes skin and eye burns.

May be fatal if inhaled, absorbed through skin or swallowed.

May cause adverse reproductive effects.

May cause allergic respiratory reaction.

May cause allergic skin reaction.

#### Hazard Ratings:

These ratings are TBS' Inc. own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
3	0	0

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**Section 4: First Aid Measures**

Contact medical personnel immediately.

Flush eyes with flowing water for at least 15 minutes.

If breathing is difficult, contact emergency personnel.

Remove to fresh air.

Wash skin with deluge of water for at least 15 minutes.

**Section 5: Fire Fighting Measures**

Flash point, deg F.: no data

Method:

UEL: no data      LEL: no data

Autoignition temperature, deg. F.: no data

Flammability Classification: no data

Flame Propagation Rate: no data

Hazardous Combustion Products: no data

**Section 6: Accidental Release Measures**

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Prevent contact with combustible materials.

Protect personnel from exposure.

Sweep up solids.

Use appropriate personal protective equipment.

**Section 7: Handling and Storage**

Store at room temp

**Section 8: Exposure Controls/ Personal Protection**

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

Use chemical splash goggles and face shield.

Use latex or equivalent gloves.

Use process enclosures, local exhaust ventilation, or other engineering controls.

**Section 9: Physical and Chemical Properties**

Formula: no data

vapor pressure: no data

Formula Weight: no data

vapor density: no data

boiling point: no data

Specific gravity: 1

melting point: no data

ph: no data

solubility: no data

appearance: liquid

**Section 10: Stability and Reactivity**

Chemical Stability stable

Conditions to Avoid: heat light

Incompatibility with other materials: ammonia, powdered metals, alkali metals,

Hazardous Decomposition Products: iodine gases

Hazardous Polymerization: will not occur

**Section 11: Toxicological Information**

Acute Data: LD50 oral rat; 14 g/kg

Subchronic data: no data

**Section 12: Ecological Information**

no data

**Section 13: Disposal Considerations**

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number

the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance

with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
007553562	not listed	not listed
007681110	not listed	not listed
007732185	not listed	not listed

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**Section 14: Transportation Data**

Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

**UN Number:** 1987

**Section 15: Regulatory Information**

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
007553562	no	no
007681110	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	FL	MA	MN	WA
007553562				
007681110	not listed			
007732185	not listed			

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
007553562	not listed	not listed	not listed
007681110	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
007553562	not listed	not listed	not listed
007681110	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a

CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
007553562	Not listed	Not listed
007681110	Not listed	Not listed
007732185	Not listed	Not listed

**Section 16: Other Information**

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NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**END OF MSDS**

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Date Issued: February 16, 2011  
Supersedes Date: 1/4/2011

## MATERIAL SAFETY DATA SHEET

### Section 1: Chemical Product and Company Identification

Cat#: SPS-GE  
Part Name: COUNTERSTAIN II SOLN. F  
Supplier: Triangle Biomedical Sciences, Inc. (TBS)  
3014 Croasdaile Drive  
Durham, NC 27705  
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

### Section 2: Composition/ Information on Ingredients

Item#		CAS#	% in product
1	2,4,6-Trinitrophenol	000088891	43
2	Acid Fuchsin	003244880	14
3	Water	007732185	43

### OSHA (ACGIH) Exposure Limits

	TWA	STEL		CEILING	
		ppm	mg/	ppm	mg/m3
CAS#: 000088891	IDLH: 75 mg/m3				
OSHA		Not classifi	0.1	--	--
ACGIH		--	0.1	--	--
CAS#: 003244880	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE
CAS#: 007732185	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE

### Section 3: Hazards Identification

Causes skin and eye irritation.  
Flammable liquid and vapor.  
Harmful if inhaled, absorbed through skin or swallowed.  
Impact or high temperatures can cause violent decomposition.  
May cause allergic skin reaction.

#### Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
2	1	0

NA = not applicable      NL = not listed      NE = not established      NNR = not normally required



### Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
000088891	not listed	not listed
003244880	not listed	not listed
007732185	not listed	not listed

### Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

**UN Number: 1987**

### Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
000088891	no	no
003244880	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	FL	MA	MN	NJ	PA	WA
000088891	not listed					
003244880	not listed					
007732185	not listed					

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
000088891	Picric acid	1.0	not listed
003244880	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
000088891	not listed	not listed	not listed
003244880	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
000088891	Not listed	Not listed
003244880	Not listed	Not listed

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

007732185

Not listed

Not listed

**Section 16: Other Information**

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**END OF MSDS**

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NA = not applicable

NL = not listed

NE = not established

NNR = not normally required



Date Issued: February 16, 2011  
 Supersedes Date: 1/4/2011

## MATERIAL SAFETY DATA SHEET

### Section 1: Chemical Product and Company Identification

Cat#: SPS-GE  
 Part Name: COUNTERSTAIN I SOLN. E  
 Supplier: Triangle Biomedical Sciences, Inc. (TBS)  
 3014 Croasdaile Drive  
 Durham, NC 27705  
 Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

### Section 2: Composition/ Information on Ingredients

Item#		CAS#	% in product
1	2,4,6-Trinitrophenol	000088891	2
2	Acid Fuchsin	003244880	1
3	Water	007732185	97

### OSHA (ACGIH) Exposure Limits

	TWA	STEL		CEILING	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
CAS#: 000088891	IDLH: 75 mg/m <sup>3</sup>				
OSHA		Not classifi	0.1	--	--
ACGIH		--	0.1	--	--
CAS#: 003244880	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE
CAS#: 007732185	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE

### Section 3: Hazards Identification

Causes skin and eye irritation.  
 Flammable liquid and vapor.  
 Harmful if inhaled, absorbed through skin or swallowed.  
 Impact or high temperatures can cause violent decomposition.  
 May cause allergic skin reaction.

#### Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
2	1	0

NA = not applicable      NL = not listed      NE = not established      NNR = not normally required



**Section 12: Ecological Information**

EC50 algae, 72 hr: 575 mg/l  
 EC50 Daphnia, 48 hr: 80-102 mg/l  
 LC50 fish, 96 hr: 180 mg/l

**Section 13: Disposal Considerations**

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
000088891	not listed	not listed
003244880	not listed	not listed
007732185	not listed	not listed

**Section 14: Transportation Data**

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

**UN Number: 1987**

**Section 15: Regulatory Information**

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
000088891	no	no
003244880	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	FL	MA	MN	NJ	PA	WA
000088891						
003244880	not listed					
007732185	not listed					

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
000088891	Picric acid	1.0	not listed
003244880	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
000088891	not listed	not listed	not listed
003244880	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a

CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
000088891	Not listed	Not listed
003244880	Not listed	Not listed

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

007732185

Not listed

Not listed

**Section 16: Other Information**

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**END OF MSDS**

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NL = not listed

NE = not established

NNR = not normally required



Date Issued: February 16, 2011  
 Supersedes Date: 1/4/2011

## MATERIAL SAFETY DATA SHEET

### Section 1: Chemical Product and Company Identification

Cat#: SPS-GE  
 Part Name: 10% AQUEOUS FERRIC CHLORIDE SOLN B  
 Supplier: Triangle Biomedical Sciences, Inc. (TBS)  
 3014 Croasdaile Drive  
 Durham, NC 27705  
 Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

### Section 2: Composition/ Information on Ingredients

Item#	CAS#	% in product
1 Iron chloride (FeCl3)	007705080	10
2 Water	007732185	90

#### OSHA (ACGIH) Exposure Limits

	TWA	STEL		CEILING	
		ppm	mg/	ppm	mg/m3
CAS#: 007705080	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE
CAS#: 007732185	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE

### Section 3: Hazards Identification

Causes skin and eye burns.  
 Causes skin, eye and respiratory tract irritation.

#### Hazard Ratings:

These ratings are TBS' Inc. own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
3	0	0

### Section 4: First Aid Measures

Brush off the skin.  
 Contact medical personnel if discomfort persists.  
 Flush eyes with flowing water for at least 15 minutes.  
 Separate eyelids with finger tips.  
 Wash skin with deluge of water for at least 15 minutes.

NA = not applicable      NL = not listed      NE = not established      NNR = not normally required

**Section 5: Fire Fighting Measures**

Flash point, deg F.: no data                      Method: no data  
 UEL: no data              LEL: no data                      Autoignition temperature, deg. F.: no data  
 Flammability Classification: no data                      Flame Propagation Rate: no data  
 Hazardous Combustion Products: no data

**Section 6: Accidental Release Measures**

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources

from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Protect personnel from exposure.

Sweep up solids.

**Section 7: Handling and Storage**

Store at room temp

**Section 8: Exposure Controls/ Personal Protection**

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

Use chemical splash goggles and face shield.

Use latex or equivalent gloves.

Use process enclosures, local exhaust ventilation, or other engineering controls.

**Section 9: Physical and Chemical Properties**

Formula:	FeCl <sub>3</sub>	vapor pressure:	<1 mm Hg
Formula Weight:	no data	vapor density:	5.61
boiling point:	no data	Specific gravity:	1
melting point:	>500 dec.	ph:	no data
solubility:	soluble	appearance:	yellow liquid

**Section 10: Stability and Reactivity**

Chemical Stability stable

Conditions to Avoid: none

Incompatibility with other materials: forms explosive mixtures with sodium and potassium

Hazardous Decomposition Products: no data

Hazardous Polymerization: will not occur

**Section 11: Toxicological Information**

Acute Data: LD50 oral rat 450mg/Kg

Subchronic data: fertility effects

**Section 12: Ecological Information**

no data

**Section 13: Disposal Considerations**

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
007705080	not listed	not listed
007732185	not listed	not listed

**Section 14: Transportation Data**

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

**UN Number: 1987**

NA = not applicable

NL = not listed

NE = not established

NNR = not normally required

**Section 15: Regulatory Information**

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
007705080	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	MA	PA
007705080		
007732185	not listed	

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)  
This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
007705080	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of

SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
007705080	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
007705080	Not listed	Not listed
007732185	Not listed	Not listed

**Section 16: Other Information**

**TRIANGLE BIOMEDICAL SCIENCES (TBS)** provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. TBS makes no representation or warranties, either expressed or implied of merchantability, fitness for particular purposes with respect to the information set forth herein or to which the information refers. Accordingly, TBS will not be responsible for damages resulting from the use of or reliance upon this information.

**END OF MSDS**

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NA = not applicable      NL = not listed      NE = not established      NNR = not normally required



Date Issued: February 16, 2011  
Supersedes Date: 1/4/2011

## MATERIAL SAFETY DATA SHEET

### Section 1: Chemical Product and Company Identification

Cat#: SPS-GE  
Part Name: 5% SODIUM THIOSULPHATE SOLN. D  
Supplier: Triangle Biomedical Sciences, Inc. (TBS)  
3014 Croasdaile Drive  
Durham, NC 27705  
Phone: 919-384-9393

Emergency Notification: ChemTel Inc. 1-888-255-3924 International +01-813-248-0585

### Section 2: Composition/ Information on Ingredients

Item#	CAS#	% in product
1 Sodium thiosulfate pentahydrate	010102177	5
2 Water	007732185	95

### OSHA (ACGIH) Exposure Limits

	TWA	STEL		CEILING	
		ppm	mg/	ppm	mg/m3
CAS#: 007732185	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE
CAS#: 010102177	IDLH: NE				
OSHA		NE	NE	NE	NE
ACGIH		NE	NE	NE	NE

### Section 3: Hazards Identification

Causes eye irritation.

#### Hazard Ratings:

These ratings are TBS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
1	0	0

### Section 4: First Aid Measures

Flush eyes with flowing water for at least 15 minutes.  
If breathing is difficult, contact emergency personnel.  
If swallowed, wash out mouth with water if person is conscious.  
Wash skin with deluge of water for at least 15 minutes.

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## Section 5: Fire Fighting Measures

Flash point, deg F.: no data                      Method: no data  
UEL: no data              LEL: no data                      Autoignition temperature, deg. F.: no data  
Flammability Classification: no data                      Flame Propagation Rate: no data  
Hazardous Combustion Products: no data

## Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources

from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Absorb liquids on absorbent material.

Contain spilled liquids.

Protect personnel from exposure.

Use appropriate personal protective equipment.

## Section 7: Handling and Storage

Store at room temp

## Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

No special protection is indicated.

## Section 9: Physical and Chemical Properties

Formula:	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ·5H <sub>2</sub> O	vapor pressure:	no data
Formula Weight:	nav	vapor density:	no data
boiling point:	100 C	Specific gravity:	1.0
melting point:	0 C	ph:	no data
solubility:	miscible	appearance:	clear colorless liquid

## Section 10: Stability and Reactivity

Chemical Stability stable

Conditions to Avoid: no data

Incompatibility with other materials: no data

Hazardous Decomposition Products: no data

Hazardous Polymerization: will not occur

## Section 11: Toxicological Information

Acute Data: no data

Subchronic data: no data

## Section 12: Ecological Information

no data

## Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number

the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance

with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
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CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

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