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### Material Safety Data Sheet

Creation Date 07-Aug-2009

Revision Date 07-Aug-2009

Revision Number 1

**Product Name**

**BOVINE BLOOD / SERUM PRODUCTS**

**Cat No.**

05-010, CH30160, SH30014, SH30065, SH30068, SH30070, SH30071, SH30072, SH30073, SH30075, SH30076, SH30077, SH30079, SH30080, SH30084, SH30087, SH30088, SH30109, SH30118, SH30151, SH30212, SH30370, SH30372, SH30396, SH30397, SH30401, SH30402, SH30403, SH30406, SH30409, SH30413, SH30414, SH30417, SH30527, SH30528, SH30530, SH30531, SH30532, SH30533, SH30534, SH30541, SH30544, SH30545, SH30559, SH30560, SH30591, SH30592, SH30611, SH30624, SH30625, SH30626, SH30627, SH30655, SH30856, SH30878, SH30891, SH30892, SH30898, SH30910, SH3A1165, SH3A1248, SH3A144, SH3A1622, SH3A1550, SH3A1609, SH3A1856, SH3A1874, SV30087, SH3A1943, SH3A1944, SH3A1984, SH3A1987, SH3A2109, SH3A899, SV30014, SV30095, SV30160

**Synonyms**

No information available.

**Recommended Use**

In vitro methods

Company  
HyClone Laboratories, Inc.  
925 West 1800 South  
Logan, UT 84321 United States  
Tel: (435) 792-8000

Emergency Telephone Number  
INFOTRAC - 24 Hour Number: 1-800-535-5053  
Outside of the United States, call 24  
Hour Number: 001-352-323-3500 (Call Collect)

Thermo Fisher Scientific - BOVINE BLOOD / SERUM PRODUCTS

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**CAUTION!**

**Emergency Overview**

All blood products should be treated as potentially infectious, and handled as if capable of transmitting infectious agents. May cause eye and skin irritation. Handle in accordance with good industrial hygiene and safety practice. Low hazard for usual industrial or commercial handling.

Appearance Yellow-orange, Red brown

Physical State Liquid

odor Characteristic

**Target Organs**

None known.

**Potential Health Effects**

**Acute Effects**

**Principle Routes of Exposure**

Eye  
Skin  
Inhalation  
Ingestion

May cause irritation.  
May cause irritation.  
Low hazard for usual industrial or commercial handling.  
Low hazard for usual industrial or commercial handling.

**Chronic Effects**

None known.

See Section 11 for additional Toxicological Information.

**Aggravated Medical Conditions**

No information available.

**Haz/Non-haz**

Component	CAS-No	Weight %
Bovine Blood Component	NA	<= 100
Inorganic Salts	NA	<= 40
Amino Acids	NA	<= 1
Vitamins	NA	<= 2
Standard Cell Culture Media	NA	<= 1
Ethanolamine	141-43-5	<= 0.5
Ammonium metavanadate	7803-55-5	<= 0.5
Process water	7732-18-5	<= 25

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

**Ingestion**

Do not induce vomiting. Obtain medical attention.

Notes to Physician Treat symptomatically.

Flash Point Method Not applicable  
No information available.

Autoignition Temperature No information available.

Explosion Limits Upper No data available  
Lower No data available

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.  
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical  
Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA Health 1 Flammability 0 Instability 0 Physical hazards N/A

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. After clean-up, disinfect affected area with bleach and water at a ratio of 1:20. Dispose of cleanup material in marked biohazard container.

Handling Wear personal protective equipment. Handle as potentially infectious. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Product should be handled aseptically and stored in sterile conditions to avoid bacterial contamination.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at °C.

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanolamine	TWA: 3 ppm STEL: 6 ppm	(Ceiling) TWA: 8 mg/m <sup>3</sup> (Ceiling) TWA: 3 ppm (Ceiling) STEL: 6 ppm (Ceiling) STEL: 15 mg/m <sup>3</sup> TWA: 8 mg/m <sup>3</sup>	IDLH: 30 ppm TWA: 8 mg/m <sup>3</sup> TWA: 3 ppm STEL: 6 ppm STEL: 15 mg/m <sup>3</sup>
Ammonium metavanadate			Ceiling: 0.05 mg/m <sup>3</sup>

  

Component	Quebec	Illinois OEL (TWA)	Ontario TWAEV
Ethanolamine	TWA: 3 ppm TWA: 7.5 mg/m <sup>3</sup> STEL: 6 ppm STEL: 15 mg/m <sup>3</sup>	TWA: 3 ppm TWA: 8 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup> STEL: 6 ppm	TWA: 3 ppm TWA: 7.5 mg/m <sup>3</sup> STEL: 6 ppm STEL: 15 mg/m <sup>3</sup>

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eyeface Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Physical State Liquid  
Appearance Yellow-orange, Red brown  
odor Characteristic  
Odor Threshold No information available.  
pH Not applicable  
Vapor Pressure No information available.  
Vapor Density No information available.  
Viscosity No information available.  
Boiling Point/Range Not applicable  
Melting Point/Range No information available.  
Decomposition temperature °C No information available.  
Flash Point No information available.  
Evaporation Rate No information available.  
Specific Gravity No information available.  
Solubility No information available.  
log Pow No data available

Stability Stable under normal conditions.

Conditions to Avoid Excess heat  
 Incompatible Materials None known  
 Hazardous Decomposition Products None known  
 Hazardous Polymerization Hazardous polymerization does not occur  
 Hazardous Reactions None under normal processing.

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanolamine	1720 mg/kg (Rat)	1 mL/kg (Rabbit) 1025 mg/kg (Rabbit)	Not listed
Ammonium metavanadate	56.1 mg/kg (Rat)	2102 mg/kg (Rat)	7800 µg/m <sup>3</sup> (Rat) 4 h
Process water	90 mL/kg (Rat)	Not listed	Not listed

Irritation No information available.

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disruptor Information No information available

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Fleas
Ethanolamine	EC50 72 h 15 mg/L	Not listed	Microtox = 110 mg/L EC50 Pseudomonas putida 17 h = 12200 mg/L EC50 Nitrosomonas 2 h = 13.7 mg/L EC50 Photobacterium phosphoreum 30 min	EC50 48 h 55 mg/L

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Ethanolamine	-1.91

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

DOT

UN-No UN1845  
 Proper Shipping Name CARBON DIOXIDE, SOLID  
 Hazard Class 9  
 Packing Group III

TDG

UN-No UN1845  
 Proper Shipping Name CARBON DIOXIDE, SOLID  
 Hazard Class 9  
 Packing Group III

IATA

UN-No UN1845  
 Proper Shipping Name CARBON DIOXIDE, SOLID  
 Hazard Class 9  
 Packing Group III

**IMDG/IMO**

UN-No UN1845  
 Proper Shipping Name CARBON DIOXIDE, SOLID  
 Hazard Class 9  
 Packing Group III

All of the components in the product are on the following inventory lists:

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Ethanolamine	X	X	-	206-483-3	-		X	X	X	X	KE-20493 X
Ammonium metavanadate	X	X	-	232-261-3	-		X	X	X	X	KE-01756 X
Process water	X	X	-	231-791-2	-		X	-	X	X	KE-35400 X

**Legend:**

- X - Listed
- E - Indicates a substance that is the subject of a Section 6(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 6(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commercial PMN substance.
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule.
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710.9).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprise one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Ammonium metavanadate	7803-66-4	<= 0.5	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard No  
 Chronic Health Hazard No  
 Fire Hazard No  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

Clean Water Act  
 Not applicable

Clean Air Act  
 Not applicable

OSHA  
 Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Ammonium metavanadate	1000 lb	-

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethanolamine	X	X	X	X	X
Ammonium metavanadate	X	X	X	-	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade No information available

**Canada**

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

**WHMIS Hazard Class**

D3 Biohazardous Infectious materials



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Revision Summary \*\*\*\*, and red text indicates revision

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS