

Material Safety Data Sheet

Bovine Thrombin (Thrombin Time Reagent)

Section 1 - Chemical Product and Company Identification

MSDS Name:

Bovine Thrombin (Thrombin Time Reagent)

Catalog Numbers:

100011, 176339, 200011, 250011

Synonyms:

None Known.

Company Identification:
 Fisher Diagnostics
 Fisher Scientific Company LLC
 8365 Valley Pike
 Middletown, VA 22645-0307
Company Phone Number:

(800) 528-0494

Emergency Phone Number:

(800) 528-0494

CHEMTREC Phone Number:

800-424-9300

CHEMTREC (International):

703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS
9002-04-4	Bovine Thrombin	<1.0%	232-648-7
Not available	BSA Fraction V	1.0%	Not available
7647-14-5	Sodium chloride	0.9%	231-598-3
10043-52-4	Calcium chloride	0.222 %	233-140-8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid

Caution! Causes eye irritation. May be absorbed through intact skin. May cause skin irritation. May cause respiratory and digestive tract irritation.

Target Organs: none.

Potential Health Effects

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Causes eye irritation. Contact may cause transient eye irritation.

Skin:

Low hazard for usual industrial handling. May be absorbed through the skin.

Ingestion:

Ingestion of large amounts may cause gastrointestinal irritation. Low hazard for usual industrial handling.

Inhalation:

May cause respiratory tract irritation.

Chronic:

No information found.

Section 4 - First Aid Measures**Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media:

For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

Autoignition Temperature:

Not applicable.

Explosion Limits:

Lower: Not available. Upper: Not available.

Flash Point:

Not applicable.

NFPA Rating:

(estimated) Health: 1; Flammability: 0; Reactivity: 0

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Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage:

Store in a cool place in the original container and protect from sunlight. Keep container closed when not in use.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Bovine Thrombin	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sodium chloride	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Calcium chloride	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

OSHA Vacated PELs
Personal Protective Equipment
Eyes:

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:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

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.

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Physical State: Liquid
Color: clear, colorless
Odor: Odorless.
pH: No information found
Vapor Pressure: No information found
Vapor Density: No information found
Evaporation Rate: No information found
Viscosity: No information found
Boiling Point: Not available.
Freezing/Melting Point: No information found
Decomposition Temperature: No information found
Solubility in water: Soluble in water.
Specific Gravity/Density: No information found
Molecular Formula: Not applicable.
Molecular Weight: No information found

Section 10 - Stability and Reactivity**Chemical Stability:**

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials

Strong oxidants.

Hazardous Decomposition Products

No data available.

Hazardous Polymerization

Has not been reported

Section 11 - Toxicological Information**RTECS:**

CAS# 9002-04-4: XO8950000.
CAS# 7647-14-5: VZ4725000.
CAS# 10043-52-4: EV9800000.

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CAS# 9002-04-4:

No information found CAS# 7647-14-5:

Draize test, rabbit, eye: 100 mg Mild

Draize test, rabbit, eye: 100 mg/24H Moderate

Draize test, rabbit, eye: 10 mg Moderate

Draize test, rabbit, skin: 50 mg/24H Mild

Draize test, rabbit, skin: 500 mg/24H Mild

Inhalation, rat: LC50 = >42 gm/m³/1H

Oral, mouse: LD50 = 4 gm/kg

Oral, rat: LD50 = 3000 mg/kg

Skin, rabbit: LD50 = >10 gm/kg.

CAS# 10043-52-4:

Oral, mouse: LD50 = 1940 mg/kg

Oral, rabbit: LD50 = 1384 mg/kg

Oral, rat: LD50 = 1 gm/kg.

Carcinogenicity:

CAS# 9002-04-4: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7647-14-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 10043-52-4: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.

US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3.

Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

None of the components are on this list.

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Bovine Thrombin (Thrombin Time Reagent)**Section 14 - Transport Information****US DOT****Canadian TDG**

Proper Shipping Name: No information found
Hazard Class:
UN Number:
Packing Group:

No information found

Section 15 - Regulatory Information**US Federal****TSCA**

CAS# 9002-04-4 is listed on the TSCA Inventory.
CAS# 7647-14-5 is listed on the TSCA Inventory.
CAS# 10043-52-4 is listed on the TSCA Inventory.

Health and Safety Reporting List

None of the components are on this list.

Chemical Test Rules

None of the components are on this list.

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

None of the components are on this list.

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

CAS# 7647-14-5: acute.
CAS# 10043-52-4: acute, chronic, reactive.

CERCLA/SARA Section 313

None of the components are on this list.

Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

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None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

US State**State Right to Know****California Regulations**CAS# 9002-04-4: No information found
CAS# Not available: No information found
CAS# 7647-14-5: No information found
CAS# 10043-52-4: No information found**European/International Regulations****European Labelling in Accordance with EC Directives:**Hazard Symbols:
Risk Phrases:
Safety Phrases:**WGK (Water Danger/Protection)**CAS# 9002-04-4: 1
CAS# Not available: No information found
CAS# 7647-14-5: 0
CAS# 10043-52-4: 0**United Kingdom Occupational Exposure Limits**

No information found

Canadian DSL/NDSLCAS# 7647-14-5 is listed on Canada's DSL List.
CAS# 10043-52-4 is listed on Canada's DSL List.**Canadian WHMIS Classifications**

This product does not have a WHMIS classification.

Canadian Ingredient Disclosure ListCAS# 9002-04-4 is not listed on Canada's Ingredient Disclosure List.
CAS# Not available is not listed on Canada's Ingredient Disclosure List.
CAS# 7647-14-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 10043-52-4 is not listed on Canada's Ingredient Disclosure List.**Exposure Limits****Section 16 - Other Information**Color information has been
MSDS Creation Date: June 10, 2003
Revision Date: March 22, 2006

ACC# 92700



Print Date: 8/03/2007
Revision Date: 3/22/2006
Version: 2

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.