

MATERIAL SAFETY DATA SHEET

Section 1. Company Identification and Product Information

Product Name or Identity:	Tetrathionate Broth Base		
Manufacturer's Name:	Acumedia Manufacturers, Inc.	Emergency Phone No.:	517/372-9200
	740 East Shiawassee	Fax No.:	517/372-0108
	Lansing, MI 48912	e-mail:	foodsafety@neogen.com
Date Prepared or Revised: October 2007			

Section 2. Composition / Information on Hazardous Ingredients

Hazardous Components Specific Chemical Identity:	CAS-No.	%	EG-Number	Hazard Symbol
Calcium Carbonate	471-34-1	21.7%	N/A	Xi (Irritant)
Sodium Thiosulfate	7772-98-7	65.2%	231-867-5	Xi (Irritant)
Bile Salts Mixture #3	N/A	2.2%	N/A	Xi (Irritant)

Section 3. Health Hazard Identification

Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
Health Hazards: (Acute and Chronic)	IRRITANT. Irritating to eyes, respiratory system, and skin.		
Carcinogenicity:	IARC Monographs? No	OSHA Regulated? No	
Signs and Symptoms of Exposure: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled, absorbed through the skin, or swallowed. Irritating to skin and eyes. Excessive concentrations of a nuisance dust may cause coughing, sneezing, and nasal irritation.			
Medical Conditions Generally Aggravated by Exposure: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. Excessive oral doses of Calcium Carbonate may produce alkalosis and hypercalcemia. Diarrhea may occur by ingestion of large quantities.			

Section 4. First Aid Measures

Emergency / First Aid Procedures:	Ingestion: If swallowed, wash out mouth with water, provided person is conscious. Never give anything by mouth to an unconscious person. Seek medical attention.
	Inhalation: If inhaled, supply fresh air or oxygen. Seek medical attention. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen.
	Eye Contact: Rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Seek medical attention.
	Skin Contact: Remove contaminated clothing. Immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention. Wash clothing before reuse.

Section 5. Fire and Explosion Hazard Data

Flash Point (Method Used): N/A	Flammable Limits: LEL – N/A UEL – N/A
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.	
Special Fire Fighting Procedures: Firefighters should wear protective equipment and self-contained breathing apparatus.	
Unusual Fire and Explosion Hazards: During heating or in case of fire, poisonous gases are produced. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source, is a potential dust explosion hazard.	

Section 6. Accidental Release Measures

Personal Precautions: Shut off all sources of ignition, ventilate spill area. Wear suitable protective clothing, gloves, and eye protection. Wear self-containing breathing apparatus, rubber boots, and heavy rubber gloves. Place contaminated material in a chemical waste container.

Environmental Precautions: Prevent dispersion of material. Do not allow to enter drains or water courses. Water runoff can cause environmental damage.

Clean-up Methods: Contact safety officer and ventilate area. Absorb spill with inert material, including dry-lime, sand, or soda ash, then place into a chemical waste container using non-sparking tools. Wash spill site.

Section 7. Handling and Storage

Handling: Protect against physical damage. Ensure good ventilation / exhaustion. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not use if skin is cut or scratched.

Storage: Keep container tightly closed. Keep away from incompatible material. Storage area should be cool, dry and well ventilated. Containers of this material may be hazardous when empty since they retain product residues.

Other Precautions: Remove contaminated clothing immediately. Ensure good ventilation. Prevent dust formation.

Section 8. Exposure Controls / Personal Protection

OSHA (PEL): 15 mg/m³ total dust, Calcium Carbonate)

ACGIH TLV: 3 mg/m³ (Calcium Carbonate)

Engineering Measures: Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Proper ventilation, safety shower, and eye bath required.

Respiratory Protection (Specify Type): See Engineering Measures listed above. In the event of possible spill / exposure, use dust mask to EN 149 FFP2S. Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Ventilation: Local Exhaust: 50 – 100 CFM

Special: Safety shower and eye wash.

Protective Gloves: Compatible chemical-resistant gloves.

Eye Protection: Safety glasses or chemical goggles to EN 166, 167, and 168.

Other Protective Clothing or Equipment: Uniform, lab coat, or disposable lab wear.

Work / Hygienic Practices: Follow the usual precautionary measure for handling chemicals / powder. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin, and clothing.

Section 9. Physical and Chemical Properties

Boiling Point: > 100 °C (Sodium Thiosulfate)

Specific Gravity: 2.9 g/cm (Calcium Carbonate)
1.75 g/cm (Sodium Thiosulfate)

Vapor Pressure: N/A

Melting Point: 825°C (Calcium Carbonate), 48°C (Sodium Thiosulfate)

Vapor Density (AIR = 1): N/A

Solubility in Water: 79 g/ 100 mL water (Sodium Thiosulfate)
0.001 gm in 100 ml water (Calcium Carbonate), Soluble (Bile Salts)

Appearance and Odor: Fine white powder, odorless (Calcium Carbonate), Colorless crystals, odorless (Sodium Thiosulfate).

Section 10. Stability and Reactivity

Stability: Unstable

Stable

X

Conditions to Avoid: Stable under recommended storage conditions.

Incompatibility (Materials to Avoid): Incompatible with strong oxidizing agents, acids, fluorine, Magnesium with hydrogen, Sodium nitrate, and halogens.

Hazardous Decomposition or Byproducts: When heated to decomposition (825°C), emits Calcium oxide fumes, liberates Carbon dioxide, Oxides of sulfur and Hydrogen sulfide.

Hazardous Polymerization:

May Occur

Will Not Occur

X

Conditions to Avoid: Heat, and incompatible materials.

Section 11. Toxicological Information

LD₅₀: ORL-RAT, 6450 mg/kg (Calcium Carbonate), IPR-MUS, 5200 mg/kg (Sodium Thiosulfate)

Section 12. Ecological Information

Ecotoxicity Tests: N/A

Section 13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with all applicable federal, state, and local environmental regulations. Keep waste separate. Contact a licensed professional waste disposal service to dispose of this material if questions arise. Do not allow product to reach ground water, water bodies, or sewage system.

Container Information: Do not remove labels from containers until they have been cleaned.

Section 14. Transport Information

Bile Salts Mixture # 3:

Not Regulated.

This substance is considered to be non-hazardous for transportation.

Calcium Carbonate:

Not Regulated.

This substance is considered to be non-hazardous for transportation.

Sodium Thiosulfate:

Not Regulated.

This substance is considered to be non-hazardous for transportation.

Section 15. Regulatory Information

EU Regulations

Hazard Symbol(s):

Bile Salts Mixture #3: Xi (Irritant)

Calcium Carbonate: Xi (Irritant)

Sodium Thiosulfate: Xi (Irritant)

Risk Phrases:

Bile Salts Mixture #3: R 36 / 37 / 38, Irritating to eyes, respiratory system, and skin.

Calcium Carbonate: R 36 / 37 / 38, Irritating to eyes, respiratory system, and skin.

Sodium Thiosulfate: R 36 / 37 / 38, Irritating to eyes, respiratory system, and skin.

Safety Phrases:

Bile Salts Mixture #3: S 24 / 25 / 26, Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Calcium Carbonate: S 37 / 38 / 41, Wear suitable gloves. In case of insufficient ventilation, wear suitable respiratory equipment. In case of fire and / or explosion do not breathe fumes.

Sodium Thiosulfate: S 26 / 36 / 37 / 39 / 45, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Section 16. Other Information

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