



MATERIAL SAFETY DATA SHEET

Section I – Product Information			
Product Name or Identity:	M-Broth		
Manufacturer's Name:	Acumedia Manufacturers, Inc.	Emergency Phone No.	517/372-9200
	740 East Shiawassee	Fax No.:	517/372-2006
	Lansing, Michigan 48912	e-mail:	foodsafety@neogen.com
Date Prepared or Revised:	10/10/04		

Section II – Hazardous Ingredients / Identity Information			
Hazardous Components: (Specific Chemical Identity: Common Names)	OSHA PEL (Permissible Exposure Limits)	ACGIH TLV (Threshold Limit Value)	Toxicity Data LD ₅₀
Sodium Chloride, NaCl	N/A	N/A	ORL-RAT, 3000 mg/kg
Magnesium Sulfate	N/A	N/A	SUBCUT-RAT, 1200 mg/kg
Sodium Citrate	N/A	N/A	N/A
Potassium Phosphate	N/A	N/A	SKN-RBT, > 4640 mg/kg

Section III – Physical Characteristics	
Boiling Point: 1413°C (NaCl)	Specific Gravity (H ₂ O = 1): 1.7 (Sodium Citrate), 2.16 (NaCl), 2.57 (Magnesium Sulfate)
Vapor Pressure (mm Hg.): N/A	Melting Point: 150°C (Sodium Citrate), > 465°C (Potassium Phosphate), 804°C (NaCl), 150°C (Magnesium Sulfate).
Vapor Density (AIR = 1): N/A	Evaporation Rate (Butyl Acetate = 1): N/A
Solubility in Water: 72 g/100 g of water (Sodium Citrate), 150 g/ 100 g cold water (Potassium Phosphate)	
Appearance and Odor: White crystals, odorless (Sodium Citrate), White crystals or powder, odorless (Potassium Phosphate), White powder, characteristic odor (NaCl), White powder (Magnesium Sulfate).	

Section IV – Fire and Explosion Hazard Data	
Flash Point (<i>Method Used</i>): Not applicable	Flammable Limits: LEL (Lower Explosive Limit) - N/A UEL (Upper Explosive Limit) - N/A
Extinguishing Media: Suitable extinguishing agents. CO ₂ , extinguishing powder, or water spray.	
Special Fire Fighting Procedures: Fight larger fires with water or alcohol resistant foam. Firefighters should wear protective equipment and self-contained breathing apparatus. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.	
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 V – Reactivity Data			
Stability:	Unstable		Conditions to Avoid: Protect from light and moisture. Hygroscopic.
	Stable	X	
Incompatibility (<i>Materials to Avoid</i>): Reacts with acids, alkalis, and oxidizing agents.			
Hazardous Decomposition or Byproducts: Acids, Phosphorus oxides, Nitrogen oxides, Carbon monoxide (CO), Carbon dioxide (CO ₂), and Sodium oxide may form when heated to decomposition.			
Hazardous Polymerization:	May Occur		Conditions to Avoid: Heat, flame, ignition sources, dust and incompatible materials.
	Will Not Occur	X	

Section VI – Health Hazard Data			
Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
Health Hazards: (Acute and Chronic)	Irritant. Irritating to eyes, respiratory system, and skin. May be harmful if swallowed.		
Carcinogenicity:	NTP? No (National Toxicology Program)	IARC Monographs? No (International Agency for Research in Cancer)	OSHA Regulated? No
Signs and Symptoms of Exposure: If large doses are ingested, can cause vomiting, diarrhea, and prostration. Inhalation of large amounts of dust may cause irritation to the respiratory tract. Possible irritation on prolonged contact with moist or sensitive areas of the skin.			
Medical Conditions Generally Aggravated by Exposure: May be irritating to mucous membranes and respiratory tract. The toxicity of phosphates is their ability to sequester calcium. Chronic exposure of phosphates may sequester calcium and cause calcium phosphates deposits in the kidneys.			
Emergency / First Aid Procedures:	Ingestion: If swallowed, seek medical attention.		
	Inhalation: Supply fresh air or oxygen. Seek medical attention.		
	Eye Contact: Rinse opened eye for at least 15 minutes under running water. Seek medical attention.		
	Skin Contact: Wash with plenty of soap and water for 15 minutes. If irritation develops, seek medical attention.		

Section VII – Precautions for Safe Handling and Use
Accidental Release Measures: Ventilate spill area. Avoid raising dust. Wear suitable protective clothing. Wipe up with damp sponge or mop. Avoid contact with skin, eyes, and clothing.
Waste Disposal Method: Dispose in accordance with all applicable federal, state, and local environmental regulations.
Handling and Storing: Keep container tightly closed. Protect from moisture and physical damage. Suitable for any general chemical storage area. Store away from oxidizing agents. Containers of this material may be hazardous when empty since they retain product residues.
Other Precautions: Prevent formation of dust. Ensure good ventilation / exhaustion at the workplace. Avoid prolonged or repeated exposure.

Section VIII – Control Measures		
Respiratory Protection (Specify Type): None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.		
Ventilation:	Local Exhaust: 50 – 100 CFM	Special: N/A
	Mechanical (General): N/A	Other: N/A
Protective Gloves: Proper disposable gloves	Eye Protection: Chemical resistant safety goggles	
Other Protective Clothing or Equipment: Uniform, lab coat, or disposable lab wear.		
Work / Hygienic Practices: Follow the usual precautionary measures for handling chemicals / powder. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin, and clothing.		

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