Product # (s) 7127

MATERIAL SAFETY DATA SHEET

Section I – Product Information			
Product Name or Identity:	**Columbia 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, Common salt	N/A	N/A	ORL-RAT, 3000 mg/kg
Sodium Carbonate	N/A	N/A	ORL-RAT, 4090 mg/kg
TRIS (Hydroxymethyl) Aminomethane	N/A	N/A	ORL-RAT, 5900 mg/kg

Section III – Physical Characteristics	
Boiling Point: 1413ºC (NaCl), 220ºC (TRIS)	**Specific Gravity** (H_2O = 1): 2.16 g/cm^3 (NaCl), 2.53 (Sodium Carbonate)
Vapor Pressure (mm Hg.): 1.0 @ 865ºC (NaCl)	**Melting Point:** 804ºC (NaCl), 171.2ºC (TRIS), 851ºC (Sodium Carbonate)
Vapor Density (AIR = 1): N/A	**Evaporation Rate** (Butyl Acetate = 1): N/A
Solubility in Water: 35.7 g/100g at 0ºC (NaCl), Soluble (TRIS), 45.5 g/ 100 mL water @ 100ºC (Sodium Carbonate)	
Appearance and Odor: Colorless crystals or white powder. Characteristic odor (NaCl), White powder, odorless (Sodium Carbonate)	

Section IV – Fire and Explosion Hazard Data	
Flash Point *(Method Used)*: 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.	
Unusual Fire and Explosion Hazards: During heating or in case of fire, poisonous gases are produced.	

Section V – Reactivity Data			
Stability:	Unstable		Conditions to Avoid: Stable under ordinary conditions of use and storage. Hygroscopic. Readily absorbs moisture from air. Protect from moisture.
	Stable	X	
Incompatibility *(Materials to Avoid)*: Reacts with acids, alkalis, oxidizing agents, Lithium, and Bromine trifluoride.			
Hazardous Decomposition or Byproducts: Carbon monoxide, Carbon dioxide, Sodium oxides, Sulfuric acid, Zinc, Lithium, and Nitrogen oxides. When heated to above 801°C it emits toxic fumes of chloride and sodium oxide. Sodium Carbonate reacts violently with acids to form Carbon dioxide.			
Hazardous Polymerization:	May Occur		Conditions to Avoid: Moisture, heat, dusting, 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: Irritant to respiratory tract and mucous membranes. Inhalation of dust may include coughing and difficult breathing. Irritating effect to eye.			
Medical Conditions Generally Aggravated by Exposure: If ingested, can cause vomiting, diarrhea, and prostration. Excessive contact can cause damage to the nasal septum. Excessive skin contact can cause irritation with blistering and redness. Solutions may cause burns or irritation.			
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 at least 15 minutes. Seek medical attention.		

Section VII – Precautions for Safe Handling and Use
Accidental Release Measures: Ventilate spill area. Wear suitable protective clothing. Wipe up with damp sponge or mop. Remove contaminated 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. Suitable for any general chemical storage area. Store away from oxidizing agents. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues.
Other Precautions: Prevent formation and inhalation of dust. Ensure good ventilation / exhaustion at the workplace. Avoid repeated or prolonged 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.		