



## MATERIAL SAFETY DATA SHEET

Section I – Product Information			
<b>Product Name or Identity:</b>	PALCAM Broth		
<b>Manufacturer's Name:</b>	Acumedia Manufacturers, Inc.	<b>Emergency Phone No.:</b>	517/372-9200
	740 East Shiawassee	<b>Fax No.:</b>	517/372-2006
	Lansing, Michigan 48912	<b>e-mail:</b>	foodsafety@neogen.com
<b>Date Prepared or Revised:</b> 10/11/04			

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 <sub>50</sub>
Lithium Chloride	N/A	N/A	ORL-RAT, 526 mg/kg
Ferric Ammonium Citrate	N/A	1 mg/m <sup>3</sup> (soluble iron salt)	N/A

Section III – Physical Characteristics	
<b>Boiling Point:</b> 1360°C (Lithium Chloride)	<b>Specific Gravity (H<sub>2</sub>O = 1):</b> 2.07 (Lithium Chloride)
<b>Vapor Pressure (mm Hg.):</b>	<b>Melting Point:</b> 613°C (Lithium Chloride)
<b>Vapor Density (AIR = 1):</b> N/A	<b>Evaporation Rate (Butyl Acetate = 1):</b> N/A
<b>Solubility in Water:</b> Soluble (Lithium Chloride), Very soluble in water (Ferric Ammonium Citrate)	
<b>Appearance and Odor:</b> White crystals, odorless (Lithium Chloride) Green or red-brown powder, odorless to slight ammonia odor (Ferric Ammonium Citrate).	

Section IV – Fire and Explosion Hazard Data	
<b>Flash Point (Method Used):</b> Not applicable	<b>Flammable Limits:</b> LEL:(Lower Explosive Limit) - N/A UEL:(Upper Explosive Limit) - N/A
<b>Extinguishing Media:</b> Suitable extinguishing agents. CO <sub>2</sub> , extinguishing powder, or water spray.	
<b>Special Fire Fighting Procedures:</b> Fight larger fires with water or alcohol resistant foam. Firefighters should wear protective equipment and self-contained breathing apparatus.	
<b>Unusual Fire and Explosion Hazards:</b> During heating or in case of fire, poisonous gases are produced. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.	

Section V – Reactivity Data			
<b>Stability:</b>	Unstable		Conditions to Avoid: Moisture and air sensitive. Ferric Ammonium Citrate is reduced to ferrous salt by exposure to light. Very deliquescent, forms a solution on prolonged exposure to air.
	Stable	X	
<b>Incompatibility (Materials to Avoid):</b> Incompatible with strong acids, metals, iodides, acacia preparations, tannins, and oxidizers.			
<b>Hazardous Decomposition or Byproducts:</b> Carbon dioxide (CO <sub>2</sub> ), Lithium oxide (LiOx), Phosphorus oxides (POx), Hydrogen chloride (HCl), and Sulfur oxides (SOx).			
<b>Hazardous Polymerization:</b>	May Occur		Conditions to Avoid: Moisture, light, moisture, and incompatible materials.
	Will Not Occur	X	

**Section VI – Health Hazard Data**

<b>Route(s) of Entry:</b>	Inhalation? Yes	Skin? Yes	Ingestion? Yes
<b>Health Hazards:</b> (Acute and Chronic)	Harmful. Harmful if swallowed, inhaled, or absorbed through the skin. Irritating to eyes, respiratory system, and skin. Skin irritation may be severe. Lithium Chloride may affect central nervous system effects.		
<b>Carcinogenicity:</b>	NTP? No (National Toxicology Program)	IARC Monographs? No (International Agency for Research in Cancer)	OSHA Regulated? No
<b>Signs and Symptoms of Exposure:</b> Lithium Chloride can affect the central nervous system, respiratory system, muscles and kidneys. Irritant to skin and mucous membranes. Irritating effect on the eyes, can cause redness and pain.			
<b>Medical Conditions Generally Aggravated by Exposure:</b> Lithium Chloride causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting, and diarrhea. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage has been recorded. Persons with pre-existing skin disorders, impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.			
<b>Emergency / First Aid Procedures:</b>	Ingestion: If swallowed, seek medical attention immediately.		
	Inhalation: In case of unconsciousness, place patient on side position for transportation. 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: Immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention.		

**Section VII – Precautions for Safe Handling and Use**

<b>Accidental Release Measures:</b>	Ventilate spill area. Wear suitable protective clothing. Wipe up with damp sponge or mop. Remove contaminated clothing immediately. Avoid inhalation of skin, eyes, and clothing.		
<b>Waste Disposal Method:</b>	Dispose in accordance with all applicable federal, state, and local environmental regulations.		
<b>Handling and Storing:</b>	Keep container tightly closed. Store at < 30°C in cool, dry conditions. Do not store together with oxidizing and acidic materials. Do not store together with alkali material (caustic) or metals. Protect container against physical damage. Containers may be hazardous when empty because they retain product residues.		
<b>Other Precautions:</b>	Ensure good ventilation / exhaustion at the workplace. Prevent formation of dust. Avoid dust inhalation. Avoid prolonged or repeated exposure.		

**Section VIII – Control Measures**

<b>Respiratory Protection (Specify Type):</b> None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.			
<b>Ventilation:</b>	Local Exhaust: 50 – 100 CFM	Special: N/A	
	Mechanical (General): N/A	Other: N/A	
<b>Protective Gloves:</b> Proper disposable gloves		Eye Protection: Chemical resistant safety goggles	
<b>Other Protective Clothing or Equipment:</b> Long sleeve lab coat, safety shower, and eye wash recommended.			
<b>Work / Hygienic Practices:</b> 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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