



## MATERIAL SAFETY DATA SHEET

Section I – Product Information			
<b>Product Name or Identity:</b>	<b>Lactobacilli MRS Broth</b>		
<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> 10/10/04			

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 <sub>50</sub>
Sodium Acetate Hydrate	15 mg/m <sup>3</sup> (total dust)	10 mg/m <sup>3</sup>	ORL-RAT, 3530 mg/kg
Potassium Phosphate	N/A	N/A	SKN-RBT, > 4640 mg/kg
Ammonium Citrate	N/A	N/A	N/A

Section III – Physical Characteristics	
<b>Boiling Point:</b> N/A	<b>Specific Gravity (H<sub>2</sub>O = 1):</b> 1.48 (Ammonium Citrate), 1.53 (Sodium Acetate)
<b>Vapor Pressure (mm Hg.):</b> N/A	<b>Melting Point:</b> 324°C (Sodium Acetate), >465°C (Potassium Phosphate)
<b>Vapor Density (AIR = 1):</b> 1.45 (Sodium Acetate)	<b>Evaporation Rate (Butyl Acetate = 1):</b> N/A
<b>Solubility in Water:</b> 100 gm/100 ml water (Ammonium Citrate), 119 g/100 ml water (Sodium Acetate) 150 g/100 g cold water (Potassium Phosphate)	
<b>Appearance and Odor:</b> White crystals, slight acetic acid odor. (Sodium Acetate) White crystals, odorless (Potassium Phosphate), White powder, slight ammonia odor (Ammonium Citrate).	

Section IV – Fire and Explosion Hazard Data	
<b>Flash Point (Method Used):</b> Not applicable	<b>Flammable Limits:</b> LEL (Lower Explosive Limits) - N/A UEL (Upper Explosive Limits) - 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. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.	
<b>Unusual Fire and Explosion Hazards:</b> 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			
<b>Stability:</b>	Unstable		Conditions to Avoid: Excess heat. Hygroscopic powder.
	Stable	X	
<b>Incompatibility (Materials to Avoid):</b> Incompatible with strong alkalis, oxidizers and strong acids.			
<b>Hazardous Decomposition or Byproducts:</b> Carbon dioxide (CO <sub>2</sub> ), Carbon monoxide (CO), Nitric oxide (NO <sub>x</sub> ), fluoride, potassium nitrate, strong oxidizers, ammonia and diketene. Emits fumes of acetic acid upon heating and on contact with strong acids.			
<b>Hazardous Polymerization:</b>	May Occur		Conditions to Avoid: Heat, flames, ignition sources 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)	Irritant. May cause irritation to skin, eyes, and respiratory system.		
<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> Coughing, sore throat, labored breathing and chest pain can occur after inhalation of high concentrations. Ingestion can cause gastrointestinal irritation, nausea and vomiting. Can cause irritation, redness, and pain with eye contact.			
<b>Medical Conditions Generally Aggravated by Exposure:</b> Increase contact can result in irritation, redness and pain. Persons with impaired respiratory function may be more susceptible to the effects of Ammonia Citrate or Sodium Acetate. Phosphates are slowly and incompletely absorbed when ingested. The toxicity of phosphates is their ability to sequester calcium.			
<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 immediately.		
	Eye Contact: Rinse opened eye for at least 15 minutes with plenty of 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. Remove all sources of ignition. Flush spill area with water, wipe up with damp sponge or mop.	
<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, in a cool, dry ventilated area. Protect container against physician damage. Isolate from any source of heat or ignition. Containers of this material may be hazardous when empty since they retain product residues.	
<b>Other Precautions:</b> Ensure good ventilation / exhaustion at the workplace. Remove contaminated clothing immediately. 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> Uniform, lab coat or disposable lab wear.		
<b>Work / Hygienic Practices:</b> Follow the usual precautionary measures for handling chemicals / powder. Keep away from food and beverages. Avoid contact with skin, eyes, and clothing. Avoid breathing dust.		

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