



MATERIAL SAFETY DATA SHEET

Section 1. Identification of the Product

Product Name or Identity:	Lactobacilli MRS Agar		
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 Ingredient

Hazardous Components Specific Chemical Identity:	CAS-No.	%	EG-Number	Hazard Symbol
Sodium Acetate	127-09-3	7.1%	204-823-8	Xi (Irritant)
Potassium Phosphate	7758-11-4	2.8%	231-834-5	Xi (Irritant)
Ammonium Citrate	3012-65-5	2.8%	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. May be harmful if swallowed.		
Carcinogenicity:	IARC Monographs? No	OSHA Regulated? No	
Signs and Symptoms of Exposure: May cause irritation if absorbed through the skin. Material may be irritating to mucous membranes and upper respiratory tract; sore throat, coughing, and chest pain may occur. Maybe harmful if swallowed or inhaled. May cause eye irritation with redness and pain.			
Medical Conditions Generally Aggravated by Exposure: Gastrointestinal disturbances can occur if ingested, symptoms include nausea, vomiting, and diarrhea. Persons with impaired respiratory function may be more susceptible to the effects of the substance.			

Section 4. First Aid Measures

Emergency / First Aid Procedures:	Ingestion: If swallowed, rinse mouth with water provided person is conscious. Seek medical attention.
	Inhalation: Supply fresh air and oxygen. If breathing is difficult, seek medical attention.
	Eye Contact: Rinse opened eye for at least 15 minutes with plenty of water. Ensure adequate flushing by separating the eyelids with fingers. Seek medical attention.
	Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing. Seek medical attention if irritation develops.

Section 5. Fire and Explosion Hazard Data

Flash Point (Method Used): Autoignition temperature: 611°C (Sodium Acetate) Flash Point > 250 °C (Closed Cup) (Sodium Acetate)	Flammable Limits: LEL – N/A UEL – N/A
Extinguishing Media: Suitable extinguishing agents, CO ₂ , extinguishing powder, alcohol foam, 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 a n 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 6. Accidental Release Measures

Personal Precautions: Shut off all sources of ignition. Wear respirator, chemical safety goggles, rubber boots, and rubber gloves. Absorb material, ventilate area, and wash spill site after material has been cleaned up. Prevent direct contact with skin, eyes, or clothing. 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 spill area. Reduce airborne dust and prevent scattering by moistening with water. Absorb spill with inert material, including dry-lime, sand, or soda ash. 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 / exhaust. 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 formation of dust.

Section 8. Exposure Controls / Personal Protection

OES: N/A

ACGIH TLV: N/A

Engineering Measures: Where protection from nuisance levels of dust is 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.

Respiratory Protection (Specify Type): With sufficient ventilation, breathing apparatus is not necessary. In the event of possible spill / exposure, use dust mask to EN 149 FFP2S.

Ventilation:

Local Exhaust: 50 – 100 CFM

Special: Safety shower and eye wash

Protective Gloves: Compatible chemical-resistant gloves

Eye Protection: Safety goggles

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: N/A

Specific Gravity (H₂O = 1): 1.45 g/cm³ (Sodium Acetate)
1.48 g/cm³ (Ammonium Citrate), 2.30 g/cm³ (Potassium Phosphate)

Vapor Pressure (mm Hg.): N/A

Melting Point: 324°C (Sodium Acetate), 340°C (Potassium Phosphate)

Vapor Density (AIR = 1): 1.8 g/L (Ammonium Citrate)

Evaporation Rate (Butyl Acetate = 1): N/A

Solubility in Water: 76 gm/100 mls water (Sodium Acetate), Soluble (Potassium Phosphate), 100 gm/ 100 gm water (Ammonium Citrate)

Appearance and Odor: Colorless crystals, slight acetic acid odor (Sodium Acetate)

White granules or powder, slight ammonia odor (Ammonium Citrate), White granules, odorless (Potassium Phosphate).

Section 10. Stability and Reactivity

Stability:

Unstable

Conditions to Avoid: Stable under normal temperatures and pressure. Avoid moisture.

Stable

X

Incompatibility (Materials to Avoid): Incompatible with Ethyl alcohols, arsenates, phosphates, tartrates, lead, barium, strontium, strong oxidizing agents, and calcium.

Hazardous Decomposition or Byproducts: Thermal decomposition may produce toxic fumes of phosphorus oxides, phosphine, Potassium oxides, Carbon oxides, ammonia, Nitrogen oxides, and Sodium oxides. Emits fumes of acetic acid upon heating and on contact with strong acids.

Hazardous Polymerization:

May Occur

Conditions to Avoid: Heat, moisture, and incompatible materials.

Will Not Occur

X

**Section 11. Toxicological Information****LD₅₀:** ORL-RAT, 3,530 mg/kg. Investigated as a mutagen. (Sodium Acetate)**LD₅₀:** SKN-RBT, > 4,640 mg/kg (Potassium Phosphate)**LD₅₀:** IVN-MSE, 331 mg/kg (Ammonium Citrate)**Section 12. Ecological Information****Ecotoxicity Tests:** LC₅₀: 5000 mg/L, 24 hrs, *Lepomis macrochirus* (Bluegill) (Sodium Acetate)**Section 13. Disposal Information****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 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**

*Sodium Acetate is not regulated for transportation.

UN # --*

Class: --

Packing Group: --

Hazard Class: --

IATA: Non-Hazardous for Air Transport

*Potassium Phosphate is not regulated for transportation.

UN # --*

Class: --

Packing Group: --

Hazard Class: --

IATA: Non-Hazardous for Air Transport

*Ammonium Citrate is not regulated for transportation.

UN # -*

Class: --

Packing Group: --

Hazard Class: --

IATA: Non-Hazardous for Air Transport

Section 15. Regulatory Information**EU Regulations****Hazard Symbols:****Sodium Acetate:** Xi (Irritant)**Potassium Phosphate:** Xi (Irritant)**Ammonium Citrate:** Xi (Irritant)**Risk Phrases:****Sodium Acetate:** R 36 / 37 / 38, Irritating to eyes, respiratory system, and skin.**Potassium Phosphate:** R 36, Irritating to eyes.**Ammonium Citrate:** R 36 / 37, Irritating to eyes and respiratory system.**Safety Phrases:****Sodium Acetate:** S 22 / 24 / 25, Do not breathe dust. Avoid contact with skin. Avoid contact with eyes.**Potassium Phosphate:** S 26 / 36, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.**Ammonium Citrate:** S 26, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.**Section 16. Other Information**

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