



MATERIAL SAFETY DATA SHEET

Section 1. Company Identification and Product Information			
Product Name or Identity:	APT Agar		
Manufacturer's Name:	Acumedia Manufacturers, Inc.	Emergency Phone No.:	517/372-9200
	740 East Shiawassee	Fax No.:	517/372-0108
	Lansing, Michigan 48912	e-mail:	foodsafety@neogen.com
Date Prepared or Revised:	December 2007		

Section 2. Composition / Information on Hazardous Ingredients				
Hazardous Components Specific Chemical Identity:	CAS-No.	%	EG-Number	Hazard Symbol
Sodium Chloride, NaCl	7647-14-5	8.6%	231-598-3	Xi (Irritant)
Potassium Phosphate	7758-11-4	8.6%	231-834-5	Xi (Irritant)
Sodium Citrate	6132-04-3	8.6%	200-675-3	Xi (Irritant)
Magnesium Sulfate	7487-88-9	1.4%	231-298-2	Xi (Irritant)
Sodium Carbonate	497-19-8	2.2%	2078388	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 ingested or contact with eyes.		
Carcinogenicity:	IARC Monographs? No	OSHA Regulated? No	
Signs and Symptoms of Exposure: Irritant if inhaled, coughing possible and breathing difficulties may be observed. May be harmful if swallowed or inhaled. Sodium Carbonate can result in eye burns, conjunctival edema and corneal destruction. Prolonged contact with skin can cause redness, dermatitis, and blisters.			
Medical Conditions Generally Aggravated by Exposure: May be harmful if inhaled, causing respiratory tract irritation, coughing, and breathing difficulties. Gastrointestinal disturbances can occur if ingested, causing abdominal pain, vomiting, and diarrhea. The toxicity of phosphates is their ability to sequester calcium. Chronic exposure of phosphates may sequester calcium and cause calcium phosphate deposits in the kidneys			

Section 4. First Aid Measures	
Emergency / First Aid Procedures:	Ingestion: If swallowed, wash out mouth with water, provided person is conscious. Never give anything by mouth to an unconscious person. Seek medical attention.
	Inhalation: If inhaled, supply fresh air or oxygen. Seek medical attention. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen.
	Eye Contact: Rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Seek medical attention.
	Skin Contact: Remove contaminated clothing. Immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention. Wash clothing before reuse.

Section 5. Fire and Explosion Hazard Data	
Flash Point (Method Used): N/A	Flammable Limits: LEL – N/A UEL – N/A
Extinguishing Media: Use alcohol foam, dry chemical, or carbon dioxide. Water may be effective for cooling, but may not effect extinguishment.	
Special Fire Fighting Procedures: Firefighters should wear protective equipment and self-contained breathing apparatus. The product itself does not burn.	
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, ventilate spill area. Wear suitable protective clothing, gloves, and eye protection. Wear self-containing breathing apparatus, rubber boots, and heavy rubber gloves. Place contaminated material in a chemical waste container. Prevent direct contact with skin, eyes, or clothing.

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 area. Absorb spill with inert material, including dry-lime, sand, or soda ash, then 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 / exhaustion. 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 dust formation.

Section 8. Exposure Controls / Personal Protection

OES: N/A

ACGIH – TLV: N/A

Engineering Measures: Respiratory protection is not required. Where protection from nuisance levels of dusts are 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 required.

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 glasses or chemical goggles to EN 166, 167, and 168.

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: 1461°C (NaCl)

Specific Gravity: 2.16 g/cm³ (NaCl), 1.07 g/cm³ (Magnesium Sulfate)
2.5 g/cm³ (Sod Carbonate), 2.3 g/cm³ (Pot Phosphate), 1.7 g/cm³ (Sod Citrate)

Vapor Pressure: 1 mm at 865°C (NaCl)
< 0.1 at 20 (Magnesium Sulfate)

Melting Point: 804 °C (NaCl), 1124 °C (Magnesium Sulfate)
851 °C (Sod Carbonate) , > 465°C (Potassium Phosphate), 150°C (Sod Citrate)

Vapor Density (AIR = 1): N/A

Solubility in Water: Partly soluble (NaCl), Soluble (Magnesium Sulfate)
150 g/ 100 g cold water (Pot Phosphate), 72 g / 100 g water (Sodium Citrate)

Appearance and Odor: Solid, colorless or white, odorless (NaCl), Solid white, granules, odorless (Potassium Phosphate), White powder (Sodium Carbonate), Clear crystals or white powder, odorless (Mag Sulfate), White crystals, odorless (Sod Citrate)

Section 10. Stability and Reactivity

Stability:

Unstable

Stable

X

Conditions to Avoid: Moisture. Stable under recommended storage conditions.

Incompatibility (Materials to Avoid): Incompatible with strong oxidizing agents, alcohols, arsenates, phosphates, tartrates, lead, barium, strontium, Potassium oxides, Fluorine, Aluminum, Sulfuric acid, Lithium, and Calcium hydroxide.

Hazardous Decomposition or Byproducts: Carbon monoxide, Carbon dioxide, Oxides of sulfur, magnesium, Sodium oxide, and Hydrogen chloride gas. Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine. Contact with acids release Sulfur dioxide.

Hazardous Polymerization:

May Occur

Will Not Occur

X

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

**Section 11. Toxicological Information**

LD₅₀: ORL-RAT, 3,000 mg/kg (Sodium Chloride)
LD₅₀: ITP-MSE, 1,029 mg/kg (Magnesium Sulfate)
LD₅₀: SKN-RBT, > 4640 mg/kg (Potassium Phosphate)
LD₅₀: ORL-RAT, 4090 mg/kg (Sodium Carbonate)

Section 12. Ecological Information

Ecotoxicity Tests: LC₅₀: 1,294.6 mg/L, 96 hours, *Lepomis macrochirus* (Bluegill) (Sodium Chloride)
LC₅₀: 300 mg/L, 96 hours, *Lepomis macrochirus* (Bluegill) (Sodium Carbonate)
LC₅₀: 2,820 m/L, 96 hours, *Pimephales promelas* (Fathead minnow) (Magnesium Sulfate)

Section 13. Disposal Considerations

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 product 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 Chloride, Potassium Phosphate, Sodium Citrate, Magnesium Sulfate, Sodium Carbonate:*

UN # --

Packing Group: --

Hazard Class: --

IATA: Non-Hazardous for air transport

*These chemicals are not regulated for transportation.

Section 15. Regulatory Information

EU Regulations, Hazard Symbol(s):

Sodium Chloride, Potassium Phosphate, Sodium Citrate, Magnesium Sulfate, Sodium Carbonate: Xi (Irritant)

Risk Phrases:

Sodium Chloride: R 36 / 38, Irritating to eyes and skin.

Potassium Phosphate: R 36 / 37 / 38, Irritating to eyes, respiratory system, and skin.

Sodium Carbonate: R 36, Irritating to eyes.

Magnesium Sulfate: R 36 / 37 / 38, Irritating to eyes, respiratory system, and skin.

Safety Phrases:

Sodium Chloride: S 24 / 25 / 26, Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Potassium Phosphate: S 22 / 24 / 25, Do not breathe dust. Avoid contact with skin and eyes.

Sodium Carbonate: S 22 / 26, Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Magnesium Sulfate: S/ 24 / 25 / 26, Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Section 16. Other Information

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