



## MATERIAL SAFETY DATA SHEET

Section I – Product Information			
<b>Product Name or Identity:</b>	Rappaport-Vassiliadis R10 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
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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 Chloride, NaCl, Common salt	N/A	N/A	ORL-RAT, 3000 mg/kg
Magnesium Chloride	N/A	N/A	ORL-RAT, 2800 mg/kg
Potassium Phosphate	N/A	N/A	SKN-RBT, >4640 mg/kg

Section III – Physical Characteristics	
<b>Boiling Point:</b> 1413°C (NaCl)	<b>Specific Gravity</b> (H <sub>2</sub> O = 1): 2.16 g/cm <sup>3</sup> (NaCl) 2.32 g/cm <sup>3</sup> (Magnesium Chloride)
<b>Vapor Pressure (mm Hg.):</b> 1.0 @ 865°C (NaCl)	<b>Melting Point:</b> 804°C (NaCl), >465°C (Potassium Phosphate) 714°C (Magnesium Chloride)
<b>Vapor Density</b> (AIR = 1): N/A	<b>Evaporation Rate</b> (Butyl Acetate = 1): N/A
<b>Solubility in Water:</b> 35.7 g/100g at 0°C (NaCl), 150 g/ 100 g cold water (Potassium Phosphate) 167 g/100 mL water at 20°C (Magnesium Chloride)	
<b>Appearance and Odor:</b> Colorless crystals or white powder. Characteristic odor. (NaCl) White crystals or powder, odorless ( Potassium Phosphate), Colorless crystals or flakes, odorless (Magnesium Chloride).	

Section IV – Fire and Explosion Hazard Data	
<b>Flash Point</b> ( <i>Method Used</i> ): 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. Remove contaminated clothing immediately.	
<b>Unusual Fire and Explosion Hazards:</b> During heating or in case of fire, poisonous gases are produced.	

Section V – Reactivity Data			
<b>Stability:</b>	Unstable		Conditions to Avoid: Hygroscopic. Protect from moisture and light. By strong ignition, Magnesium Chloride is converted into oxychloride.
	Stable	X	
<b>Incompatibility</b> ( <i>Materials to Avoid</i> ): Reacts with acids, alkalis, oxidizing agents, Lithium, and Bromine trifluoride. When Magnesium Chloride is mixed with limited amount of water, enough heat may be generated to cause frothing.			
<b>Hazardous Decomposition or Byproducts:</b> Acids, alkalis, oxidizing agents, Phosphorus oxides (POx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), and Nitrogen oxides (NOx). When heated to decomposition, Magnesium Chloride emits corrosive hydrochloric acid vapor. When heated to temperatures above 300°C it emits toxic fumes of chlorine gas.			
<b>Hazardous Polymerization:</b>	May Occur		Conditions to Avoid: Moisture, light, 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. Irritating to eyes, respiratory system, and skin. May be harmful if swallowed.		
<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> Inhalation of dust may cause irritation to mucous membranes and upper respiratory tract. Irritating effect to eye. Phosphates and magnesium salts are slowly and incompletely absorbed when ingested. Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, and central nervous system effects.			
<b>Medical Conditions Generally Aggravated by Exposure:</b> The toxicity of phosphates is their ability to sequester calcium. May sequester calcium and cause calcium phosphate deposits in the kidneys. Person with impaired kidney function may be more susceptible to the effects of the substance.			
<b>Emergency / First Aid Procedures:</b>	Note to Physician: IV administration of calcium gluconate will partially reverse the effects of acute magnesium toxicity. Ventricular support with calcium chloride infusion and mannitol forced diuresis has also been successful.		
	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 15 minutes. If irritation develops, 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. Avoid inhalation and contact with skin or eyes.
<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. Protect from moisture and physical damage. Suitable for any general chemical storage area. Store away from oxidizing agents. Containers of this material may be hazardous when empty since they retain product residues.
<b>Other Precautions:</b> Prevent formation of dust. Ensure good ventilation / exhaustion at the workplace. Avoid prolonged or repeated exposure.

Section VIII – Control Measures		
<b>Respiratory Protection</b> (Specify Type): 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. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin, and clothing.		

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