



**1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION**

PRODUCT NAME: Deconstructed MS Group IV (Micros w/o Fe), 100x Murashige & Skoog  
 PRODUCT NUMBER: M5634  
 COMPANY INFO: PhytoTech Labs Inc.  
 14610 W 106<sup>th</sup> St. Lenexa, KS 66215  
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EMERGENCY PHONE NUMBER 1-800-535-5053 - US Only  
 (INFOTRAC): 1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by PhytoTech Labs Inc. are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, in vitro diagnostics, or as household chemicals.

**2. HAZARDS IDENTIFICATION**

Classification of the substance or mixture

GHS Classification:

- H315 - Skin irritation (Category 2)
- H319 - Eye irritation (Category 2A)

GHS Label elements, including hazard and precautionary statements:



Signal Word: **Warning**

Hazard Statements:

- H315 – Causes skin irritation.
- H319 – Causes serious eye irritation.
- H335 – May cause respiratory irritation.

Precautionary Statements:

- P280 – Wear protective clothing/protective gloves/eye protection.
- P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Hazards not otherwise classified (HNOC) or not covered by GHS: - none**

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient	CAS Number	Percent	Hazardous
Water	7732-18-5	97.717%	No exposure limits established by OSHA or ACGIH
Manganese Sulfate, Heptahydrate	10034-96-5	1.69%	No exposure limits established by OSHA or ACGIH
Zinc Sulfate, Heptahydrate	7446-20-0	0.86%	No exposure limits established by OSHA or ACGIH
Boric Acid	10043-35-3	0.62%	No exposure limits established by OSHA or ACGIH
Potassium Iodide	7681-11-0	0.083%	No exposure limits established by OSHA or ACGIH
Sodium Molybdate, Dihydrate	10102-40-6	0.025%	No exposure limits established by OSHA or ACGIH
Cobalt Chloride, Hexahydrate	7791-13-1	0.0025%	No exposure limits established by OSHA or ACGIH
Cupric Sulfate, Pentahydrate	7758-99-8	0.0025%	No exposure limits established by OSHA or ACGIH

#### 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. <b>Get medical attention.</b>
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. <b>Get medical attention.</b>
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. <b>Get medical attention if irritation persists.</b>
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

#### 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Protective Equipment and Precaution for Firefighters:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.
Hazardous Combustion Products:	No data available

#### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Method of Containment and Cleanup:	Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let product enter drains.

#### 7. HANDLING AND STORAGE

Precaution for Safe Handling:	Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Provide adequate ventilation at places where dust is formed. Wash thoroughly after use.
Conditions for Safe Storage:	Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Product is hygroscopic.
Incompatibilities:	Strong oxidizing agent
Recommended Storage Temperature:	2-8°C

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs): 5.0 – 15.0 mg/m<sup>3</sup> (Sodium molybdate, dihydrate)

Threshold Limit Values (TLVs):	0.50 – 10.0 mg/m <sup>3</sup> (Sodium molybdate, dihydrate)
Engineering Controls:	Handle in accordance to general industrial hygiene and safety practice.
Personal Protective Equipment (PPE):	
Eye/Face Protection:	Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.
Skin Protection:	Protective gloves
Body Protection:	Lab coat
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colorless liquid
pH:	3.5 – 5.5
Solubility:	Miscible with water
Melting Range:	No data available
Vapor Density:	No data available
Vapor Pressure:	No data available
Specific Gravity:	No data available
Odor:	Odorless
Odor Threshold:	No data available
Viscosity:	No data available
Relative Density:	No data available
Evaporation Rate:	No data available
Initial Boiling Point and Boiling Range:	No data available
Flammability (solid, gas):	No data available
Partition coefficient: n-octanol/water):	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flash Point (Closed Cup):	No data available
Flammable Limits:	Upper (%) – No data available                      Lower (%) – No data available

## 10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions of use
Possibility of Hazard Reactions:	No data available
Conditions to Avoid:	No data available
Incompatibles Materials:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide

## 11. TOXICOLOGICAL INFORMATION

Toxicity:	LD <sub>50</sub> (Oral-Rat)(mg/Kg)	No data available
	LD <sub>50</sub> (Oral-Mouse)(mg/Kg)	No data available
	LD <sub>50</sub> (Dermal-Rabbit)(mg/Kg)	No data available

Carcinogenicity: NTP: No  
IARC: No  
OSHA Reg: No

Reproductive Toxicity: No data available

Specific Target Organ Toxicity: Single Exposure: No data available  
Repeated Exposure: No data available

Target Organs: No data available

Routes of Entry: Inhalation and ingestion

NIOSH/RTECS NO: No data available

*The toxicological properties of this product have not been thoroughly investigated*

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available  
Persistence and Degradability: No data available  
Bioaccumulative Potential: No data available  
Mobility in Soil: No data available  
Other Adverse Effects: No data available

## 13. DISPOSAL CONSIDERATION

Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

## 14. TRANSPORT INFORMATION

Domestic (D.O.T.): Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

International:

IMDG: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

IATA: Proper Shipping Name: CHEMICALS, N.O.S. (NON-REGULATED)  
Hazard Class: N/A  
UN/NA: N/A  
Labels: N/A

## 15. REGULATORY INFORMATION

TSCA: Yes

SARA TITLE III:

Section 302 (EHS) Ingredients: No  
 Section 313 Ingredients: No  
 Section 304 (EHS/CERCLA) Ingredients: No  
 Section 311/312 Hazard: No

**Massachusetts Right to Know Components:** This product is not on the Massachusetts Toxic or Hazardous Substance List (301 CMR 41.00).

**Pennsylvania Right to Know Components:** This product is not listed on the Pennsylvania Code’s Hazardous Substance List (Chapter 323).

**New Jersey Right to Know Components:** This product is not listed amongst the New Jersey Right to Know Hazardous Substance Fact Sheets.

**California Prop. 65 Components:** This product is not known to the State of California to cause cancer or reproductive toxicity.

**16. OTHER INFORMATION**

HMIS Rating:	Health Hazard	Flammability	Physical Hazard	Personal Protection
	0	0	0	B
NFPA Rating:	Health Hazard	Fire Hazard	Instability	Special Hazard
	0	0	0	

**PhytoTech Labs Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. PhytoTech Labs Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.**

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