



MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Butirosin Disulfate
SYNONYMS: N/A
PRODUCT NUMBER: B145
CAS NO: 51022-98-1
NIOSH/RTECS NO: EN2246000
COMPANY INFO: *PhytoTechnology Laboratories*®
PO Box 12205 Shawnee Mission, KS 66282-2205
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442
www.phytotechlab.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Potency	Hazardous
Butirosin Disulfate	51022-98-1	N/A	No exposure limits established by OSHA or ACGIH

3. PHYSICAL & CHEMICAL PROPERTIES

Product Description: Butirosin Disulfate
Formula: $C_{21}H_{41}N_5O_{12} \cdot 2H_2SO_4$
Molecular Weight: 751.73 g/mol
Storage Temperature: Room Temperature
pH (1.00 g/L): Under Development
Vapor Density: N/A
Melting Point: ~225 °C
Specific Gravity: N/A
Solubility: Soluble in water
Appearance: White to yellow powder
Odor: Odorless

4. HAZARDS IDENTIFICATION

Label Hazard Warnings: Harmful by inhalation, in contact with skin, and if swallowed. May cause harm to the unborn child.

Label Precautionary Statements: Do not breathe dust. In case of accident or if you feel unwell, seek medical advice immediately. Wear suitable protective clothing, gloves, and eye/face protection.

Laboratory Protective Equipment: Safety glasses, protective gloves, lab coat, and appropriate respirator.

HMIS Rating:	Health	Flammability	Reactivity	Personal Protection Equipment
	2	0	0	I
NFPA Rating:	Health	Flammability	Reactivity	Special Hazards
	N/A	N/A	N/A	N/A

Storage and Handling Precautions: Store in a tightly sealed container in a cool, dry place. Do not breathe dust. Wash thoroughly after handling.

5. POTENTIAL HEALTH HAZARDS/ TOXICOLOGICAL INFORMATION

Toxicity:	LD ₅₀ (IVN-Mouse)(mg/Kg):	650
	LD ₅₀ (SCU-Mouse)(mg/Kg):	4070
	LD ₅₀ (IPR-Rat)(mg/Kg):	N/A
Carcinogenicity:	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No
Effects of Overexposure:		Nausea, vomiting, headaches, dizziness, gastrointestinal irritation, central nervous system depression, kidney damage.
Target Organs:		Ears, kidneys
Medical Conditions Aggravated By Exposure:		None Identified
Routes of Entry:		Ingestion, inhalation, skin or eye contact

6. EMERGENCY AND FIRST AID

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. Get medical attention.
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. Get medical attention.
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. Get medical attention if irritation persists.
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation persists.

7. FIRE HAZARDS & FIRE FIGHTING MEASURES

Flash Point (Closed Cup):	N/A
Flammable Limits:	Upper – N/A % Lower – N/A %
Fire Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Fire-Fighting Procedures:	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.
Unusual Fire & Explosion Hazards:	May emit toxic fumes under fire conditions.
Toxic Gases Produced:	Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides

8. REACTIVITY & CONDITIONS TO AVOID

Stability:	Stable under normal conditions of use
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Moisture, incompatibles
Incompatibles:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides

9. SPECIAL PRECAUTIONS/PROTECTIVE EQUIPMENT

Ventilation:	Ventilation hood recommended
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.
Eye/Skin Protection:	Have eye-washing facilities readily available where eye contact can occur. Wear chemical safety goggles. Use appropriate chemical protective gloves when handling. Showering and changing into street clothes after work is recommended.

10. SPILLS & LEAKS

Spill or Discharge:	Wear suitable protective clothing and a self-contained breathing apparatus if available. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water.
Disposal Procedure:	Dispose in accordance with all applicable federal, state, and local environmental regulations.
EPA Hazardous Waste Number:	N/A

11. TRANSPORTATION DATA

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

12. REGULATORY INFORMATION

U.S. Federal Regulatory Information

TSCA: No

SARA TITLE III:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients: No

SARA TITLE III NOTIFICATION INFORMATION

Acute Health Hazard: No

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

International Regulatory Information

Risk Phrases: 20/21/22 – Harmful by inhalation, in contact with skin, and if swallowed
61 – May cause harm to the unborn child

Safety Phrases: 22 – Do not breathe dust
36/37/39 – Wear suitable protective clothing, gloves, and eye/face protection
45 – In case of accident or if you feel unwell, seek medical advice immediately

***PhytoTechnology Laboratories®* 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. *PhytoTechnology Laboratories®* 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.**