



Safety Data Sheet

Bio4[®] Plus

SECTION 1: Product and Company Identification

Product name: Bio4[®] Plus
Product code: 291003
Product use: Animal feed additive
Product type: Solid / powder / granule
Manufacturer: JH Biotech, Inc.
4951 Olivas Park Drive, Ventura, CA 93003
Tel: (805) 650-8933 Fax: (805) 650-8942
info@jhbiotech.com
24-Hour Emergency tel: (800) 633-8253 (United States & Canada) (801) 629-0667 (International)

SECTION 2: Hazards Identification

Signal word: None
Label element: None
Hazard statement: Not hazardous
Precautionary statement: Avoid breathing dust. Avoid contact with eyes. Wash hands thoroughly after handling.
First Aid: If inhaled: Remove from source of exposure. If in eyes: Remove contact lenses if present. Wash thoroughly with water for several minutes.
Storage & Disposal: Store in a safe manner. Dispose product/container in accordance with federal, state, and local regulations.

SECTION 3: Composition/Information on Ingredients

Component	CAS No.	Component	CAS No.
Iron methionine	n/a	Zinc methionine	56329-42-1
Copper methionine	13985-65-4	Selenium yeast	n/a
Manganese methionine	n/a		

The specific identity and/or exact percentage of composition is not provided because it is a trade secret. Product is not considered hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

SECTION 4: First Aid Measures

Inhalation: Remove from source of exposure. Get medical attention if necessary.
Skin contact: Wash thoroughly with water. Get medical attention if necessary.
Eye contact: Wash eyes with plenty of water for at least 15 minutes. Be sure to remove contact lenses. Get medical attention if necessary.
Ingestion: Wash out mouth with plenty of water. Do not induce vomiting. Get medical attention if necessary.

SECTION 5: Firefighting Measures

Suitable extinguishing media

Water spray, dry chemical, carbon dioxide, foam

Special hazards arising from the substance or mixture

None

Protection for firefighters

Wear protective clothing and equipment

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear protective clothing, gloves, and safety eye goggles.

Environmental precautions

Avoid discharge into environment

Methods and material for containment and cleaning up

Contain all spills and leaks to prevent discharge into the environment. Use appropriate tools to transfer spill material to proper disposal container. Or recover material and use it for its intended purpose.

SECTION 7: Handling and Storage

Precautions for safe handling

Avoid overheating or freezing



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Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area away from direct sunlight. Keep containers tightly closed when not in use.

SECTION 8: Exposure Controls/Personal Protection

Exposure controls

Product has no occupational exposure limits. Avoid inhaling dusts or vapors. Practice good industrial hygiene and safety.

	OSHA PEL (8 hr TWA)	NIOSH REL (10 hr TWA)	ACGIH Threshold Limit Value (8 hr TWA)
Copper dust	1 mg/m ³	1 mg/m ³	1 mg/m ³
Manganese compound	5 mg/m ³	3 mg/m ³ STEL	0.02 mg/m ³ (resp)
Selenium compound	0.2 mg/m ³	0.2 mg/m ³	0.2 mg/m ³
Zinc dust	n/a	n/a	n/a
Nuisance dust (total)	15 mg/m ³	n/a	n/a
Nuisance dust (resp)	5 mg/m ³	n/a	n/a

Personal protection

Eye protection: Eye protection is not required. To avoid contact with eyes, use safety eye goggles.
 Skin protection: Wear protective clothing as necessary to minimize contact. Use chemical resistant gloves.
 Respiratory protection: Not required. Wear approved respiratory equipment if necessary.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Beige, light brown powder	Vapor pressure	Not applicable
Odor	Slight odor	Vapor density	Not applicable
pH	4 – 6	Relative density	0.9 – 1.2 g/ml
Physical state	Solid	Solubility	Partially soluble in water
Melting point / Freezing point	>100°C/212°F	Partition coefficient	Not applicable
Boiling point	Not applicable	Auto-ignition temperature	Not applicable
Flash point	Not applicable	Decomposition temperature	Not applicable
Evaporation rate	Not applicable	Viscosity	Slightly viscous
Flammability	Non-flammable	Explosive properties	Non-explosive
Explosive limits	Not applicable	Oxidizing properties	Non-oxidizer

SECTION 10: Stability and Reactivity

Reactivity

None

Chemical stability

Product is stable.

Possibility of hazardous reactions

Under normal conditions, hazardous reaction will not occur.

Conditions to avoid

Avoid heat

Incompatible materials

None

Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological Information

Information on toxicological effects

Acute toxicity: May be harmful if swallowed
 Irritation: May cause eye or respiratory irritation
 Corrosivity: Not known to be corrosive
 Sensitization: Not known to cause sensitization
 Dose toxicity: Not known to be toxic
 Carcinogenicity: Not known to be carcinogenic
 Mutagenicity: Not known to be mutagenic
 Reproductive toxicity: Not known to cause reproductive harm



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SECTION 12: Ecological Information

Ecotoxicity

Not considered hazardous.

Persistence and degradability

Biodegradable

Bioaccumulative potential

Not available

Mobility in soil

None

SECTION 13: Disposal Considerations

Waste treatment methods

Not hazardous waste. Dispose of product in accordance with federal, state, and local regulations. Consult with qualified representative for proper disposal or treatment.

SECTION 14: Transport Information

DOT

Not regulated by U.S. DOT as hazardous material.

IATA

Not dangerous goods

IMDG

Not dangerous goods

SECTION 15: Regulatory Information

CERCLA

This product contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Selenium compounds

California Prop 65

This product does not contain any chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

SARA 311/312 Hazards

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard:	No

SARA 313

Selenium compounds are subject to reporting levels established by SARA Title III, Section 313
Zinc compounds are subject to reporting levels established by SARA Title III, Section 313.

Subject to "Right-To-Know" legislation in the following states

This product contains one or more substances subject to Right To Know.

Massachusetts:

Selenium compounds
Zinc compounds

New Jersey:

Selenium compounds
Zinc compounds



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Pennsylvania:
Selenium compounds
Zinc compounds

Illinois:
Selenium compounds

Rhode Island:
Selenium compounds

SECTION 16: Other Information

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