



Qingdao Bright Honor Biotechnology Co., Ltd

Address: Huangdao District, Qingdao City, Shandong Province, China (formerly Unit 2, Building1, No. 3, Yinshatan Road, Development Zone, Room 1303)

Email: hanyu@organic-green.cn Tel: +86-15610512127

Technical Data Sheet (TDS)

1. Product Overview

Product Name: Micronutrient Liquid Fertilizer

Type: Liquid Fertilizer

Usage: Provides essential Ca Mg and micronutrients for crops to promote healthy growth and improve yield.

Application Fields: Suitable for foliar feeding and soil application in agriculture, horticulture, and greenhouse crops.

2. Physical Properties

- **Color:** Fruit Green
- **Odor:** Mild characteristic odor
- **Density:** 1.53 g/cm³
- **Melting Point:** Not applicable (liquid solution)
- **Boiling Point:** Not applicable (liquid solution)

3. Chemical Properties

- **Chemical Composition:**
 - Calcium (Ca): ≥ 160 g/L (from calcium nitrate)
 - Magnesium (Mg): ≥ 10 g/L
 - Zinc (Zn): ≥ 4 g/L
 - Boron (B): ≥ 4 g/L
 - Nitrogen (N): ≥ 30 g/L (nitrate nitrogen)
 - Copper (Cu), Iron (Fe), Manganese (Mn), Molybdenum (Mo): total ≥ 2 g/L
 - Chloride (Cl): None
 - Sodium (Na): None
- **Molecular Structure:** Complex mixture of soluble salts and micronutrient ions in aqueous solution.
- **Molecular Weight:** Not applicable (mixture).
- **Reactivity:** Stable under normal conditions; avoid mixing with incompatible chemicals.

4. Performance Indicators

- High nutrient concentration ensures efficient plant uptake.
- Balanced micronutrient formulation supports crop health and stress resistance.
- Free from chloride and sodium to prevent soil salinity issues.



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5. Stability

- Shelf life: 5 years from manufacture date when stored properly.
- Storage Conditions: Store in a cool, dry, and well-ventilated place away from direct sunlight and frost.
- Product remains stable under recommended storage conditions without significant degradation.

6. Solubility

- Fully soluble in water.
- Good dispersion without precipitation or sedimentation.

7. pH

Measured at 250 times dilution: 6 - 7 (slightly acidic to neutral).

8. Viscosity

Low viscosity liquid with good flowability, easy to handle and apply.

9. Safety Information

- Low toxicity; not classified as hazardous.
- Non-corrosive and non-flammable.
- Avoid contact with eyes and prolonged skin exposure.
- Use personal protective equipment as appropriate during handling.

10. Usage Instructions

- Dilution Ratio: Dilute 1:800 to 1:1000 with water before application.
- Application Methods: Suitable for foliar spraying and soil drenching.
- Shake well before use.
- Apply during cooler parts of the day to avoid leaf burn.
- Store diluted solution for a short time only; use fresh for best results.
- Follow local agricultural guidelines and safety precautions.





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Material Safety Data Sheet (MSDS)

1. Product and Company Identification

Product Name: Micronutrient Liquid Fertilizer

Batch Number: 20250701

Manufacture Date: July 1, 2025

Analysis Date: July 1, 2025

Expiry Date: July 1, 2030

Manufacturer: Qingdao Bright Honor Biotechnology Co., Ltd.

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Contact Person: Hanyu

Phone: +86 15610512127

2. Composition / Information on Ingredients

Component	Concentration	CAS Number	Classification
Calcium (Ca) (from Calcium Nitrate)	≥ 160 g/L	10124-37-5 (Calcium Nitrate)	Not classified as hazardous
Magnesium (Mg)	≥ 10 g/L	7439-95-4	Not classified as hazardous
Zinc (Zn)	≥ 4 g/L	7440-66-6	Not classified as hazardous
Boron (B)	≥ 4 g/L	7440-42-8	Not classified as hazardous
Nitrogen (N) (Nitrate)	≥ 30 g/L	14797-55-8 (Nitrate ion)	Not classified as hazardous
Copper (Cu), Iron (Fe), Manganese (Mn), Molybdenum (Mo)	Total ≥ 2 g/L	Various	Not classified as hazardous
Chloride (Cl)	None	—	—
Sodium (Na)	None	—	—

3. Hazards Identification

- This product is not classified as hazardous under normal handling and use.
- May cause mild irritation if in contact with eyes or prolonged skin exposure.



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- Not flammable or explosive.

4. First Aid Measures

- **Inhalation:** Move to fresh air. Seek medical attention if symptoms persist.
- **Skin Contact:** Wash affected area with soap and water. Remove contaminated clothing.
- **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes. Seek medical advice if irritation persists.
- **Ingestion:** Rinse mouth with water. Do not induce vomiting. Seek medical attention if necessary.

5. Fire-Fighting Measures

- Suitable extinguishing media: Water spray, foam, dry chemical, or CO₂.
- Fire hazards: Product is non-flammable.
- Protective equipment: Firefighters should wear protective clothing and self-contained breathing apparatus.

6. Accidental Release Measures

- Personal precautions: Avoid contact with skin and eyes. Use protective equipment.
- Environmental precautions: Prevent product from entering drains or watercourses.
- Methods for cleaning up: Contain spill with inert absorbent material (e.g., sand, earth), collect and dispose according to local regulations.

7. Handling and Storage

- Handling: Use personal protective equipment. Avoid inhalation and contact with skin and eyes.
- Storage: Store in a cool, dry, well-ventilated place away from incompatible substances and direct sunlight.
- Keep container tightly closed when not in use.

8. Exposure Controls / Personal Protection

- **Engineering controls:** Provide adequate ventilation.
- **Personal protective equipment:**
 - Eye protection: Safety goggles or face shield.
 - Skin protection: Protective gloves and clothing.
 - Respiratory protection: Not normally required; use if ventilation is inadequate.

9. Physical and Chemical Properties

Appearance	Fruit Green Liquid
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Odor	Mild characteristic odor
pH (250x dilution)	6 - 7
Density	1.53 g/cm ³
Boiling Point	Not applicable (aqueous solution)
Melting Point	Not applicable (aqueous solution)
Solubility	Completely soluble in water

10. Stability and Reactivity

- Stable under recommended storage conditions.
- Avoid contact with strong acids, bases, and oxidizing agents.
- Decomposition products may include oxides of nitrogen and metal oxides if heated to decomposition.

11. Toxicological Information

- Low toxicity based on available data.
- May cause mild irritation to skin and eyes.
- No known chronic effects from normal use.

12. Ecological Information

- Expected to be biodegradable and low environmental impact when used as directed.
- Avoid release into waterways in large quantities.

13. Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations.
- Do not dispose of into drains or the environment.

14. Transport Information

- Not classified as dangerous goods for transport.
- Transport in original, tightly sealed containers.

15. Regulatory Information

- Complies with applicable agricultural and chemical safety regulations.

16. Other Information

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This MSDS is based on current knowledge and is intended to describe the product for safety requirements only. It does not guarantee specific properties.



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Certificate of Analysis (COA)

1. Product Information

Product Name: Micronutrient Liquid Fertilizer

Batch Number: 20250701

Manufacture Date: July 1, 2025

Analysis Date: July 1, 2025

Expiry Date: July 1, 2030

2. Manufacturer Information

Manufacturer: Qingdao Bright Honor Biotechnology Co., Ltd.

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Contact Person: Hanyu

Phone: +86 15610512127

3. Product Specifications and Analysis Results

Parameter	Specification	Analysis Result	Unit
Calcium (Ca)	≥ 160	160.5	g/L
Magnesium (Mg)	≥ 10	10.2	g/L
Zinc (Zn)	≥ 4	4.1	g/L
Boron (B)	≥ 4	4.0	g/L
Nitrogen (N) (Nitrate)	≥ 30	30.3	g/L
Copper + Iron + Manganese + Molybdenum (Cu+Fe+Mn+Mo)	≥ 2	2.05	g/L
Chloride (Cl)	None	Not detected	—
Sodium (Na)	None	Not detected	—
Color	Fruit Green	Fruit Green	—
pH (250x Dilution)	6 - 7	6.5	—
Density	1.53	1.53	g/cm ³
Calcium Source	Calcium Nitrate	Calcium Nitrate	—
Nitrogen Source	Nitrate Nitrogen	Nitrate	—



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Parameter	Specification	Analysis Result	Unit
		Nitrogen	

4. Remarks

All analysis results comply with the product specifications.

This certificate is issued based on the analysis performed on the specified batch and date.

5. Authorized Signature

