



Safety Data Sheet

Section 1: Identification

- 1.1. Product identifier
 - 1.1.1. Product Name: Fraser Broth Supplement, Ferric Ammonium Citrate
 - 1.1.2. Product Number: V431-10
- 1.2. Recommended use of product
 - 1.2.1. For use in the preparation of Fraser Broth Base and Demi-Fraser Broth Base for the selective enrichment and detection of *Listeria* spp.
- 1.3. Company information
 - 1.3.1. Manufacturer: Millennium LifeSciences, Inc.
 - 1.3.2. Address: 970 E. Orangethorpe Ave. Unit A
Anaheim, CA 92801
 - 1.3.3. Phone: 714.773.1726
 - 1.3.4. Emergency phone: 714.773.1726
 - 1.3.5. Email: msds@culturemediaconcepts.com

Section 2: Hazard(s) Identification

- 2.1. Classification of the substance or mixture
 - 2.1.1. Classification: This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by OSHA Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC, and 93/112/EC.
 - 2.1.2. Additional information
- 2.2. Label
 - 2.2.1. Signal word: None
 - 2.2.2. Symbols: None
 - 2.2.3. Hazard phrases: None
 - 2.2.4. Precautionary phrases
 - 2.2.4.1. Keep container tightly closed.
 - 2.2.4.2. Avoid contact with eyes, skin, or clothing.
- 2.3. Other hazards:
 - 2.3.1. May be mildly irritating to skin and eyes.
 - 2.3.2. May be mildly irritating to respiratory system.

Section 3: Composition/Information on Ingredients

- 3.1. Substances
- 3.2. Mixtures
 - 3.2.1. This product does not contain any hazardous substances at the concentration limits given in Regulation (EC) No. 1272/2008, WHMIS 2015 Hazardous Products Regulations, and OSHA Hazard Communication Standard 29 CFR 1910.1200.

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Section 4: First-Aid Measures

- 4.1. First-aid measures
 - 4.1.1. General
 - 4.1.1.1. When symptoms persist, seek medical attention.
 - 4.1.1.2. In general, this product is not hazardous to humans or animals, but like any other chemical, it should be treated with care, respect, and common sense.
 - 4.1.2. Contact with skin
 - 4.1.2.1. Remove contaminated clothing. Wash affected area with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be laundered before reuse.
 - 4.1.3. Contact with eyes
 - 4.1.3.1. If substance has gotten into eyes, immediately wash out with plenty of water for at least 15 minutes. Irrigate eyes thoroughly while lifting eyelids. Seek medical advice if necessary.
 - 4.1.4. Ingestion
 - 4.1.4.1. If swallowed, wash mouth out with water provided person is conscious. Do not swallow. If medical advice is needed, have product container or label at hand.
 - 4.1.5. Inhalation
 - 4.1.5.1. If breathing is difficult, remove person to fresh air and keep comfortable for breathing. Call a Poison Center or doctor/physician if you feel unwell.
- 4.2. Most important symptoms and effects, both acute and delayed
 - 4.2.1. May cause irritation.
- 4.3. Indication of any immediate medical attention and special treatment needed
 - 4.3.1. Treat symptomatically.

Section 5: Fire-Fighting Measures

- 5.1. Suitable Extinguishing Media
 - 5.1.1. In case of fire: use foam, carbon dioxide or dry agent for extinction.
- 5.2. Special hazards arising from the substance or mixture
 - 5.2.1. Smoke from fires is toxic. Take precautions to protect personnel from exposure.
 - 5.2.2. Decomposition products may include carbon oxides.
- 5.3. Recommendations for firefighters
 - 5.3.1. Keep container(s) exposed to fire cool by spraying with water.
 - 5.3.2. Wear chemical protection suit and positive-pressure breathing apparatus.
- 5.4. Hazardous Combustion Products
 - 5.4.1. May include carbon oxides.

Section 6: Accidental Release Measures

- 6.1. Personal precautions, protective equipment, and emergency procedures
 - 6.1.1. Avoid inhalation and contact with skin and eyes.
 - 6.1.2. Remove contaminated clothing.
 - 6.1.3. Wear self-containing breathing apparatus, rubber boots, and heavy rubber gloves.
- 6.2. Environmental Precautions
 - 6.2.1. Do not allow to enter public sewers and watercourses.
 - 6.2.2. Avoid scattering in the environment.

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- 6.3. Methods and materials used for containment
- 6.4. Cleanup Procedures

Section 6: Accidental Release Measures Continued

- 6.4.1. Contact safety officer and ventilate area. Absorb spill with inert material, including dry-lime, sand, or soda ash, then place into a chemical waste container using non-sparking tools. Wash spill site after material pickup is complete.

Section 7: Handling and Storage

- 7.1. Precautions for safe handling
 - 7.1.1. Do not ingest.
 - 7.1.2. Do not breathe vapor.
 - 7.1.3. Avoid contact with eyes, skin, and clothing.
 - 7.1.4. Do not eat, drink, smoke, or apply cosmetics when using this product.
 - 7.1.5. Avoid prolonged or repeated exposure.
 - 7.1.6. Do not use if skin is cut or scratched.
 - 7.1.7. Wash hands thoroughly after using this substance.
 - 7.1.8. Ensure adequate ventilation.
- 7.2. Conditions for safe storage, including any incompatibilities
 - 7.2.1. Store at temperatures not exceeding 8°C/46°F. Keep cool.
 - 7.2.2. Store in a well-ventilated place. Keep container tightly closed.
 - 7.2.3. Store in a dry place.
 - 7.2.4. Keep away from oxidizing substances.

Section 8: Exposure Controls/Personal Protection

- 8.1. Control parameters

Component	CAS No.	Value	Control Parameters	Basis
Ferric ammonium citrate	1185-57-5	TWA	1 mg/m ³	USA-NIOSH Recommended Exposure Limits
		TWA	1 mg/m ³	(TLV)

- 8.2. Personal Protective Equipment
 - 8.2.1. Wear suitable protective clothing such as gloves, safety glasses, and lab coat. No respiratory protection is needed if ventilation/extraction is adequate.
 - 8.2.2. Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
 - 8.2.3. Wear safety glasses approved to standard for NIOSH (US) or EN 166.
- 8.3. Exposure controls
 - 8.3.1. Eyewash bottles should be available.

Section 9: Physical and Chemical Properties

- 9.1. Information on physical and chemical properties
 - 9.1.1. Appearance: Dark brown to amber-olive, clear to slightly opalescent, may have yellow cast.

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- 9.1.2. Odor: No information available.
- 9.1.3. Odor threshold: No information available.
- 9.1.4. pH: No information available.
- 9.1.5. Melting point/Range: No information available.
- 9.1.6. Boiling point/Range: Not determined

Section 9: Physical and Chemical Properties Continued

- 9.1.7. Flashpoint: No information available.
- 9.1.8. Evaporation Rate: No information available.
- 9.1.9. Flammability: No information available.
- 9.1.10. Vapor Pressure: No information available.
- 9.1.11. Vapor Density: No information available.
- 9.1.12. Relative Density: No information available.
- 9.1.13. Solubility in water: Completely soluble in water.
- 9.1.14. Partition Coefficient (n-Octanol/Water): No information available.
- 9.1.15. Autoignition Temperature: No information available.
- 9.1.16. Decomposition temperature: No information available.
- 9.1.17. Explosive Properties: Product does not present an explosion hazard
- 9.1.18. Oxidizing Properties: Product is not classified as an oxidizer
- 9.1.19. Viscosity: No information available.
- 9.2. Other information:
 - 9.2.1. No information available.

Section 10: Stability and Reactivity

- 10.1. Reactivity
 - 10.1.1. No information available.
- 10.2. Chemical stability
 - 10.2.1. Considered stable under normal conditions.
- 10.3. Possibility of hazardous reactions
 - 10.3.1. No hazardous reactions known if used for its intended purpose.
- 10.4. Conditions to avoid
 - 10.4.1. Avoid strong oxidizing agents and strong bases.
- 10.5. Incompatible materials
 - 10.5.1. Incompatible with strong oxidizing agents and strong bases.
- 10.6. Hazardous decomposition products
 - 10.6.1. Decomposition products may include carbon oxides.

Section 11: Toxicological Information

- 11.1. Information on toxicological effects
 - 11.1.1. No experimental data available
 - 11.1.2. ATE_{mix}= 3,798 mg/kg (oral)
 - 11.1.3. Contact with skin
 - 11.1.3.1. May cause redness and irritation in sensitive individuals.
 - 11.1.3.2. Based on available data, the classification criteria are not met.

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- 11.1.4. Contact with eyes
 - 11.1.4.1. May cause redness and irritation in sensitive individuals.
 - 11.1.4.2. Based on available data, the classification criteria are not met.
- 11.1.5. Ingestion:
 - 11.1.5.1. Product is not toxic, but may cause irritation of the throat and/or nausea in sensitive individuals.
 - 11.1.5.2. Based on available data, the classification criteria are not met.
- 11.1.6. Inhalation:

Section 11: Toxicological Information Continued

- 11.1.6.1. May cause irritation in sensitive individuals if inhaled.
 - 11.1.6.2. Based on available data, the classification criteria are not met.
- 11.1.7. Carcinogenicity
 - 11.1.7.1. Not listed in the National Toxicology Program (NTP) 13th Report on Carcinogens.
 - 11.1.7.2. Not found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs, Volumes 1-112.
 - 11.1.7.3. Not listed in OSHA standard 1910.1003 Carcinogens.
- 11.1.8. Mutagenicity
 - 11.1.8.1. No evidence of mutagenic effects
- 11.1.9. Teratogenicity
 - 11.1.9.1. No information available.

Section 12: Ecological Information

- 12.1. Toxicity
 - 12.1.1. This product is not classified as hazardous to the environment under US regulations.
- 12.2. Persistence and degradability: No information available.
- 12.3. Bioaccumulation Potential: No information available.
- 12.4. Mobility in soil: No information available.
- 12.5. Results of PBT and vPvB assessment
 - 12.5.1. Not a PBT according to REACH annex XIII
 - 12.5.2. PBT/vPvB assessment not available
- 12.6. Other adverse effects
 - 12.6.1. To the best of our knowledge, the properties of this material have not been fully evaluated
 - 12.6.2. On available data, substance is not harmful to the environment

Section 13: Disposal Considerations

- 13.1. Waste treatment methods
 - 13.1.1. Disposal should be in accordance with local, state, or national legislation.
 - 13.1.2. Do not discharge into drains or the environment dispose to an authorized waste collection point.
- 13.2. Classification (REACH)
 - 13.2.1. Waste Codes in accordance with European Waste Catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

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Section 14: Transport Information

- 14.1. UN number: Not classified as hazardous for transport.
- 14.2. UN proper shipping name: Not available.
- 14.3. Transport hazard class(es): Not available.
- 14.4. Packing group number: Not available.
- 14.5. Environmental hazards: Not classified.
- 14.6. Guidance on transport in bulk (according to Annex II of MARPOL 73/78 and IBC code): Not classified.

Section: 15: Regulatory Information

- 15.1. Safety, health, and environmental regulations/legislation specific for the substance or mixture
 - 15.1.1. This Safety Data Sheet is provided in compliance with the EC Directive 1907/2006-453/2010 and OSHA Hazard Communication Standard 29 CFR 1910.1200.
 - 15.1.2. Regulation (EC) No. 1272/2008 on the classification, labelling, and packaging of substances and mixtures (CLP Regulation) applies in Europe.
- 15.2. Chemical Safety Assessment: No information available
- 15.3. United States Regulatory Information
 - 15.3.1. SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
 - 15.3.2. SARA 313 Components: The material does not contain any chemical components known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.
 - 15.3.3. SARA 311/312: No SARA Hazards.
 - 15.3.4. Toxic Substance Control Act (TSCA): All components of this material are either listed or exempt from listing on the TSCA Inventory.
 - 15.3.5. State Right-to-Know
 - 15.3.5.1. Massachusetts
 - 15.3.5.1.1. Ferric ammonium citrate, CAS No. 1185-57-5
 - 15.3.5.2. New Jersey
 - 15.3.5.2.1. Ferric ammonium citrate, CAS No. 1185-57-5
 - 15.3.5.3. Pennsylvania
 - 15.3.5.3.1. Ferric ammonium citrate, CAS No. 1185-57-5

Section 16: Other Information

- 16.1. This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY. Millennium LifeSciences, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.