



SAFETY DATA SHEET

Jensen's Medium Broth (Nitrogen-Free) | Catalog No. AS-1447

Prepared in accordance with GHS classification and labelling requirements (Australian regulatory format, Safe Work Australia)

Section 1: Identification

Product Name	Jensen's Medium Broth (Nitrogen-Free)
Also Known As	Jensen's Broth, Azotobacter Enrichment Broth
Catalog Number	AS-1447
Recommended Use	Laboratory culture medium for enrichment of nitrogen-fixing bacteria
Uses Advised Against	Therapeutic, diagnostic, or food-safety testing applications
Manufacturer	AuSaMicS Pty Ltd, 36/25 Trafalgar Road, Epping, Victoria, Australia
Emergency Telephone	+61 412 520 598 / Poisons Information Centre 13 11 26 (Australia)

Section 2: Hazard(s) Identification

Classification: Not classified as a hazardous substance or mixture according to GHS criteria based on the properties of its individual components (sucrose, mineral salts, calcium carbonate) at the concentrations present. The dry powder may cause mechanical/dust irritation to eyes, skin, and the respiratory tract on direct or prolonged exposure. The prepared broth presents minimal chemical hazard once sterilised, but becomes a potential biological hazard after inoculation and incubation with microorganisms — standard microbiological biosafety practices apply at that stage.



- Signal Word: None required
- Hazard Statements: None assigned; dust from the dehydrated powder may cause mild, transient irritation
- Precautionary Statements: Avoid generating dust; wash hands after handling; wear eye protection when weighing powder

Section 3: Composition / Information on Ingredients

Component	Function	Approx. Concentration
Sucrose	Energy source	Major component
Calcium carbonate	Growth stimulant	Minor component
Dipotassium phosphate	Buffering agent	Minor component
Magnesium sulfate	Mg ²⁺ ion source	Trace
Sodium chloride	Osmotic equilibrium	Trace
Ferrous sulfate	Nitrogenase cofactor	Trace
Sodium molybdate	Nitrogenase cofactor	Trace

Section 4: First-Aid Measures

- Eye contact: Rinse cautiously with water for several minutes. Seek medical attention if irritation persists.
- Skin contact: Wash with soap and water.
- Inhalation: Remove to fresh air if dust is inhaled during weighing/handling.
- Ingestion: Rinse mouth with water. Seek medical attention if discomfort occurs.

Section 5: Fire-Fighting Measures

- Suitable extinguishing media: Water spray, dry chemical, carbon dioxide, foam
- Unsuitable media: None known
- Hazardous combustion products: Oxides of carbon

Section 6: Accidental Release Measures

- Personal precautions: Avoid dust formation; wear appropriate PPE
- Environmental precautions: Avoid release to waterways
- Containment/clean-up: Sweep or vacuum spilled powder; avoid generating dust; if the broth has been inoculated and incubated, treat as biological waste and autoclave before disposal

Section 7: Handling & Storage

- Handling: Weigh dehydrated powder with adequate ventilation; avoid dust formation; use aseptic technique after preparation and sterilisation

- Storage (dehydrated): Store below 30°C, dry, protected from moisture and light, tightly closed
- Storage (prepared): Store at 2–8°C; discard if contaminated or discoloured

Section 8: Exposure Controls / Personal Protection

- Exposure limits: No specific workplace exposure standard established for this product in Australia; apply general nuisance-dust controls
- Engineering controls: Local exhaust ventilation recommended when weighing dehydrated powder
- PPE: Safety glasses, gloves, and dust mask recommended during powder handling; standard aseptic PPE (gloves, lab coat) during inoculation work

Section 9: Physical & Chemical Properties

Appearance (dehydrated)	Off-white, fine, free-flowing, hygroscopic powder
Appearance (prepared)	Cream coloured, opalescent suspension with fine precipitate
Odour	Faint, characteristic
Final pH (25°C)	7.2 – 7.8
Solubility	Disperses in water on heating; calcium carbonate remains as a fine suspension

Section 10: Stability & Reactivity

- Chemical stability: Stable under recommended storage conditions
- Incompatible materials: Strong oxidising agents
- Hazardous decomposition products: Oxides of carbon upon combustion

Section 11: Toxicological Information

The individual components of this medium (sucrose, mineral salts, calcium carbonate) are common laboratory-grade materials with low acute toxicity. Not classified as a carcinogen, mutagen, or reproductive toxicant based on available data for the formulation as supplied. Once inoculated and incubated, the prepared broth should be handled according to the institutional biosafety level applicable to the organisms cultured.

Section 12: Ecological Information

- Persistence/degradability: Components are generally biodegradable

- Bioaccumulation: Not expected to bioaccumulate
- Aquatic toxicity: Low hazard expected from unused medium; avoid unnecessary release of inoculated cultures to the environment

Section 13: Disposal Considerations

Dispose of unused dehydrated medium in accordance with local, state, and federal (Australian) regulations. Inoculated/used prepared broth must be autoclaved or otherwise inactivated before disposal, consistent with the biosafety level of the organisms cultured.

Section 14: Transport Information

UN Number	Not regulated as a dangerous good for transport
Proper Shipping Name	Not applicable
Transport Hazard Class	Not applicable
Packing Group	Not applicable

Section 15: Regulatory Information

Components are common laboratory-grade materials. Classified and labelled in accordance with the Globally Harmonized System (GHS) as adopted under the Work Health and Safety (WHS) Regulations. Laboratories culturing microorganisms on this medium must comply with the AS/NZS 2243 series (Safety in Laboratories) and relevant institutional biosafety requirements.

Section 16: Other Information

This Safety Data Sheet has been prepared by AuSaMicS Pty Ltd based on currently available data for the unused, dehydrated medium and is believed to be accurate as of the date of issue. It does not address the biosafety requirements of specific microorganisms cultured on this medium, which remain the responsibility of the end user.

Revision: 1.0

This Safety Data Sheet is provided as a general reference summary and reflects information believed to be accurate at the time of preparation. AuSaMicS Pty Ltd makes no warranty, express or implied, regarding its completeness or accuracy for any particular use. Users must independently verify regulatory and biosafety compliance applicable to their jurisdiction, institution, and the specific organisms cultured before use.