

Safety Data Sheet

Australian WHS Regulations 2023 (Cth) | GHS 7th Edition | Safe Work Australia

SECTION 1 — Identification

Product Name	ATCC 2039 Broth (Twin Pack) (Solution A + Solution B)
Catalogue Number	AS-1441
Reference	ATCC Medium 2039
Intended Use	Culture medium for Acidithiobacillus ferrooxidans and related acidophilic iron-oxidising bacteria. Laboratory and research use only.
Supplier	AuSaMicS Pty Ltd ABN 56 676 640 467
Address	31 Longview CT, Thomastown VIC 3074, Australia
Phone	+61 412 520 598
Email	support@ausamics.com.au
Emergency	Poisons Information Centre (Australia): 13 11 26 (24 hr)

SECTION 2 — Hazard Identification

Solution A (powder)	NOT classified as hazardous under Australian WHS Regulations 2023 as supplied.
Solution B (FeSO ₄ ·7H ₂ O powder)	NOT classified as hazardous at supplied concentrations. Mild irritant.
Prepared medium (pH 2.3)	CORROSIVE — GHS05 pictogram. Signal Word: DANGER. H314: causes severe skin burns and eye damage.
Precautionary	P280: wear gloves, eye protection, face shield. P305+P351+P338: if in eyes — rinse 15 min, seek medical attention. P301+P330+P331: if swallowed — do not induce vomiting, call 13 11 26.
Poison Schedule (AU)	Not a scheduled poison.

SECTION 3 — Composition

Solution A components	(NH ₄) ₂ SO ₄ MgSO ₄ ·7H ₂ O K ₂ HPO ₄ Wolfe's Mineral Solution (NTA, MgSO ₄ , MnSO ₄ , NaCl, FeSO ₄ , CoCl ₂ , CaCl ₂ , ZnSO ₄ , CuSO ₄ , AlK(SO ₄) ₂ , H ₃ BO ₃ , Na ₂ MoO ₄)
Solution B	Ferrous Sulphate Heptahydrate (FeSO ₄ ·7H ₂ O) — CAS 7782-63-0 — ≥99.0%

AICIS

All components listed on Australian Industrial Chemicals Inventory.
AICIS compliant.

SECTION 4 — First Aid

Powder contact	Wash with soap and water 15 minutes. Remove contaminated clothing.
Prepared medium — skin	Flush with large amounts of water for 20 minutes. Seek medical attention. Acidic solution causes burns.
Prepared medium — eyes	Immediately rinse with water for 15+ minutes. Seek emergency medical attention.
Ingestion	Do NOT induce vomiting. Rinse mouth. Call 13 11 26 immediately.
Note to physician	Prepared medium is dilute H_2SO_4 at pH 2.3. Treat as acid exposure. Monitor for acid burns.

SECTION 5 — Firefighting

Flammability	Not flammable.
Extinguishing media	CO_2 , dry chemical, or water spray.
Special hazards	High temperature decomposition: SO_2 , iron oxide fumes. Acidic medium reacts with reactive metals generating hydrogen gas.
PPE	Standard firefighting PPE. SCBA if fumes present.

SECTION 6 — Accidental Release

Powder spill	Sweep or vacuum carefully. Collect in labelled waste container. Avoid dust.
Prepared medium spill	Neutralise with NaHCO_3 . Absorb residue. Prevent drain entry — pH 2.3 harmful to aquatic environment. Dispose per Section 13.
PPE during cleanup	Acid-resistant gloves, chemical splash goggles, lab coat for prepared medium.

SECTION 7 — Handling and Storage

Solution A powder	15–25°C, dry, tightly sealed. Keep closed except during use. Hygroscopic.
Solution B powder	15–25°C, dry, tightly sealed, protected from moisture. Reseal promptly — FeSO_4 oxidises slowly in air.

Prepared medium	Handle as dilute acid. Acid-resistant gloves and eye protection mandatory. Use within 24 hours. Do not store.
Incompatibilities	Strong oxidising agents, alkalis, reactive metals. Prepared medium reacts with reactive metals.

SECTION 8 — Exposure Controls / PPE

Respiratory (powder)	P1 respirator for bulk weighing. Not required for small-scale use.
Respiratory (prepared medium)	Adequate ventilation. Avoid breathing acidic aerosols from agitated medium.
Eye / face protection	Safety glasses (powder). Chemical splash goggles (prepared medium).
Skin protection	Nitrile gloves (powder). Acid-resistant gloves (prepared medium). Lab coat.
WES (AU)	No specific WES for these components. Apply general dust limit 10 mg/m ³ .

SECTION 9 — Physical and Chemical Properties

Solution A appearance	White to off-white powder
Solution B appearance	Pale green to blue-green crystalline powder
Prepared medium	Clear pale green to yellow-green solution, pH 2.0–2.5
Odour	Slightly sulphurous (prepared medium)
pH (prepared)	2.0 – 2.5 (verified before use)
Iron content (Solution B)	19.0–20.0% (as Fe)
Solubility	Both parts freely soluble in water

SECTION 10 — Stability and Reactivity

Solution A stability	Stable under normal storage. Hygroscopic — keep dry.
Solution B stability	Stable as dry powder. In solution, Fe ²⁺ oxidises to Fe ³⁺ in air — use immediately after dissolution.
Prepared medium	Unstable — iron oxidation proceeds continuously. Use within 24 hours.
Incompatible materials	Strong oxidising agents; alkalis; reactive metals.
Polymerisation	Will not occur.

SECTION 11 — Toxicological Information

Acute toxicity (powder)	Low toxicity at laboratory handling concentrations.
Prepared medium	Corrosive at pH 2.3 — causes burns on contact with skin and eyes.
Carcinogenicity	Not listed as carcinogen (IARC, NTP, ACGIH).

SECTION 12 — Ecological Information

Aquatic toxicity	Prepared medium pH 2.3 is harmful to aquatic organisms. High iron may affect aquatic systems. Neutralise before disposal.
Biodegradability	Inorganic components — not biodegradable in conventional sense.

SECTION 13 — Disposal Considerations

Prepared medium	Neutralise to pH 6–8 with NaHCO_3 or NaOH before drain disposal. Precipitated iron hydroxide — dispose as inorganic waste per local EPA requirements.
Powder waste	Dispose via licensed waste contractor or institutional waste system.

SECTION 14 — Transport Information

Powder (both solutions)	Not classified as dangerous goods — ADG, IMDG, IATA
Prepared medium	May require corrosive liquid classification depending on volume. Verify before transport.

SECTION 15 — Regulatory Information

Australian WHS 2023	Powder: not classified. Prepared medium: corrosive (pH 2.3).
SUSMP (AU)	Not a scheduled poison.
AICIS	All components listed on Australian Industrial Chemicals Inventory.

SECTION 16 — Other Information

Issue date	22 July 2026
Document Ref	SDS-AS-1441-v1.0
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SDS-AS-1441-v1.0
www.ausamics.com.au

Revision history	Version 1.0 — initial issue 22 July 2026
Key references	Safe Work Australia WHS Regulations 2023; GHS 7th Edition (UN); ATCC Medium 2039 official specification.

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