



Technical Data Sheet

TDS-BA-1022
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Product Identification

Product Name	Taurine
IUPAC Name	2-aminoethanesulfonic acid
Catalog No.	BA-1022
CAS No.	107-35-7
Molecular Formula	C ₂ H ₇ NO ₃ S
Molecular Weight	125.15 g/mol
Lot No.	TAU260301
Mfg. Date	March 2026
Retest Date	March 2029
Grade	Biochemical Grade (>98%)

Physical & Chemical Properties

Appearance	White crystalline powder; free-flowing
Physical State	Divided solid
Molecular Weight	125.15 g/mol
pKa Values	pK ₁ = 1.5; pK ₂ = 8.74
Solubility	Miscible with water; 1:150 at 20 °C; ~6.7 g/100 mL
Melting Point	>300 °C (decomposes at ~300 °C)
Flash Point	Not applicable (non-flammable)
Vapour Pressure	Negligible
Odour	Odourless
Hygroscopicity	Low; store sealed to prevent moisture uptake



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pH (1% aqueous solution) ~4.1-4.5

Quality Control Specifications

Parameter	Specification	Method
Appearance	White crystalline powder; no visible discolouration	Visual inspection
Purity (titration / HPLC)	>98.0%	Potentiometric titration / HPLC amino acid analysis
Identity (IR)	Conforms to reference spectrum of Taurine (CAS 107-35-7)	IR spectroscopy (KBr disc)
Identity (HPLC)	Retention time conforms to Taurine reference standard	HPLC (OPA derivatisation)
Loss on Drying	$\leq 0.5\%$ w/w	105 °C / 2 h (gravimetric)
Heavy Metals (Pb equiv.)	≤ 20 ppm	ICP-MS
Arsenic (As)	≤ 2 ppm	ICP-MS
Sulphated Ash	$\leq 0.1\%$	Gravimetric
pH (1% aqueous solution)	4.0 - 5.0	Potentiometry (ISO 10523)
Solubility	Clear colourless solution at 50 mg/mL in purified water	Solution clarity test

Preparation & Use Guidelines

Aqueous Solution	Dissolve in purified/distilled water at 50-500 mg/mL; stir until clear; filter through 0.22 μm for cell culture applications
Cell Culture Supplement	Typical working concentration: 10-50 mM; prepare 100-500 mM stock in sterile water; filter-sterilise; store at 4 °C
Buffer Component (electrophoresis)	Taurine-Glycine-SDS running buffer: Taurine 0.192 M + SDS 0.1% — superior resolution for high-MW proteins vs standard Tris-Glycine
Osmotic Studies	Iso-osmotic solution: ~125-150 mM in physiological buffer systems



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pH Stability	Stable across broad pH range (pH 2-12) in aqueous solution
Autoclave	Stable to autoclave sterilisation (121 °C / 15 min) in aqueous solution
Incompatibilities	Avoid oxidising agents; avoid strong acids/bases at high concentration

Technical References

Biological Function	Huxtable R.J. (1992). Physiological actions of taurine. <i>Physiol Rev.</i> 72(1):101-163
Cell Culture	Schuller-Levis G.B. & Park E. (2003). Taurine: new implications for an old amino acid. <i>FEMS Microbiol Lett.</i> 226(2):195-202
Electrophoresis	Heras-Sandoval D. et al. Taurine-based SDS-PAGE running buffers for enhanced protein separation
CAS Registry	CAS 107-35-7 — multiple CAS also: 91 105-79-2 (hydrate form)
AIIC	Listed on Australian Inventory of Industrial Chemicals (AIIC)

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