



>>Entry Name: **2-Aminoethanethiol**

Synonym(s): 2-Aminoethyl mercaptan. 2-Mercaptoethylamine. Thioethanolamine. Cysteamine, BAN, USAN. **Mercaptamine**, INN. Cysteinamine. Becaptan. Lambratene. Mercamin. Merkamin. Riacon. NSC 25116

CAS Registry Number: 60-23-1

Related CAS Registry Numbers(s): 17612-91-8 20739-39-3 58607-68-4

HSCH₂CH₂NH₂

Molecular Formula: C₂H₇NS

Molecular Weight: 77.15

Accurate Mass: 77.029919

Percentage Composition: C 31.14%; H 9.14%; N 18.16%; S 41.56%

Use/Importance: Radioprotective agent, also used as antidote to paracetamol poisoning. Antiurolithic agent. Antineoplastic props. Prolactin inhibitor. Masking agent in chelatometric titration of Ca, Mg, Mn. Used as 4% MeOH soln. of hydrochloride

Physical Description: Cryst. (EtOH)

Melting Point: Mp 99-100°

Solubility: Sol. MeOH, EtOH; spar. sol. H₂O

pKa Value: pK_{a1} 8.19; pK_{a2} 10.75 (25°)

Calculated Log P Data: Log P -0.25 (calc)

Hazard & Toxicity: LD₅₀ (mus, orl) 625 mg/kg

Fluka: 30070

Sigma: M9768

>>Derivative: Hydrochloride

CAS Registry Number: 156-57-0

Melting Point: Mp 70.2-70.7°

Hazard & Toxicity: LD₅₀ (mus, orl) 1352 mg/kg

Aldrich: 12292-0

Fluka: 30080

Sigma: M8526

>>Derivative: *N*-Ac

Synonym(s): *N*-(2-Mercaptoethyl)acetamide

CAS Registry Number: 1190-73-4

Molecular Formula: C₄H₉NOS

Molecular Weight: 119.187

Accurate Mass: 119.040484

Percentage Composition: C 40.31%; H 7.61%; N 11.75%; O 13.42%; S 26.90%

Boiling Point: Bp₇ 138-140°. Bp_{0.9} 100°

Aldrich: 36334-0

>>Derivative: *S*-Ac

Synonym(s): *S*-(2-Aminoethyl) ethanethioate, 9Cl

CAS Registry Number: 6197-31-5

Molecular Formula: C₄H₉NOS

Molecular Weight: 119.187

Accurate Mass: 119.040484

Percentage Composition: C 40.31%; H 7.61%; N 11.75%; O 13.42%; S 26.90%

Physical Description: Cryst. (DMF/Et₂O) (as hydrochloride)

Melting Point: Mp 145° (hydrochloride)

>>Derivative: *N,S*-Di-Ac

Synonym(s): *S*-[2-(Acetylamino)ethyl] ethanethioate, 9Cl

CAS Registry Number: 1420-88-8

Melting Point: Mp 28-30°

Boiling Point: Bp_{0.85} 140-142°

pKa Value: pK_a 9.38 (25°, H₂O)