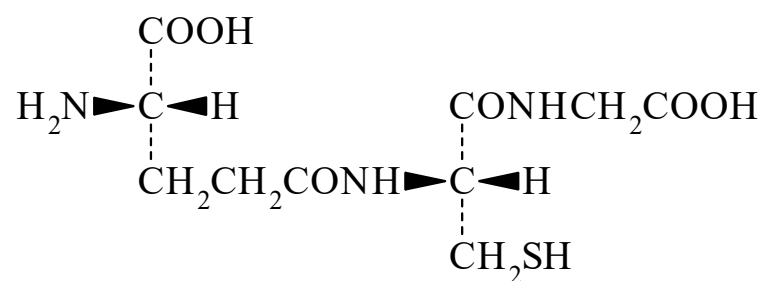




>>Entry Name: Glutathione

Synonym(s): *N*-(*N*-L- γ -Glutamyl-L-cysteinyl)glycine, 9Cl. Glutide. Tathion. GSH. Many other names



CAS Registry Number: 70-18-8

Molecular Formula: C₁₀H₁₇N₃O₆S

Molecular Weight: 307.327

Accurate Mass: 307.083807

Percentage Composition: C 39.08%; H 5.58%; N 13.67%; O 31.24%; S 10.43%

Biological Source: Basic respiratory peptide occurring in plant and animal tissues

Biological Use/Importance: Used in treatment of heavy metal poisoning. Mediator of reactions of leukotrienes; cosubstrate in reduction of peroxides; protects DNA from radiation damage. Detoxicant and anabolic agent; shows anti-HIV activity

Physical Description: Cryst.

Melting Point: Mp 190-192 dec.°

Optical Rotation: $[\alpha]_{\text{D}}^{17} -17.4$ (H₂O)

pKa Value: pK_{a1} 2.12; pK_{a2} 3.59; pK_{a3} 8.75; pK_{a4} 9.65 (25°, 0.1M KNO₃)

Calculated Log P Data: Log P -3.07 (calc)

Hazard & Toxicity: LD₅₀ (mus, orl) 5000 mg/kg. Exp. reprod. effects

Aldrich: G470-5

Fluka: 49750

Sigma: G6529

>>Derivative: Monohydrate

Physical Description: Cryst.

Optical Rotation: $[\alpha]_{\text{D}}^{20} -22$ (H₂O)

>>Derivative: Dihydrate

Physical Description: Cryst.

Optical Rotation: $[\alpha]_{\text{D}}^{20} -24.3$ (H₂O)

>>Derivative: 1-Amide

Synonym(s): Glutathione amide. GASH

CAS Registry Number: 82147-51-1

Molecular Formula: C₁₀H₁₈N₄O₅S

Molecular Weight: 306.342

Accurate Mass: 306.099791

Percentage Composition: C 39.21%; H 5.92%; N 18.29%; O 26.11%; S 10.47%

Biological Source: Prod. by *Chromatium* sp.

>>Derivative: S-(1,2-Dioxopropyl)

Synonym(s): S-Pyruvoylglutathione

CAS Registry Number: 54398-03-7

Molecular Formula: C₁₃H₁₉N₃O₈S

Molecular Weight: 377.374

Accurate Mass: 377.089287

Percentage Composition: C 41.38%; H 5.07%; N 11.13%; O 33.92%; S 8.50%

Physical Description: No phys. props. reported