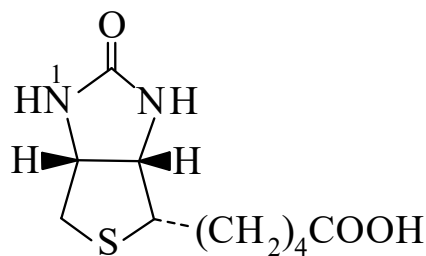




>>Entry Name: Biotin, INN, USAN

ENTRY UNDER REVIEW

Synonym(s): Hexahydro-2-oxo-1*H*-thieno[3,4-*d*]imidazole-4-pentanoic acid, 9Cl. Vitamin H. Coenzyme R. Vitamin B₇. **Factor S[‡]**



Related CAS Registry Numbers(s): 10406-89-0

Molecular Formula: C₁₀H₁₆N₂O₃S

Molecular Weight: 244.314

Accurate Mass: 244.088163

Percentage Composition: C 49.16%; H 6.60%; N 11.47%; O 19.65%; S 13.12%

Calculated Log P Data: Log P -0.18 (calc)

>>Variant: (+)-form

CAS Registry Number: 58-85-5

Extra CAS Registry Numbers(s): 22879-79-4

Molecular Formula: C₁₀H₁₆N₂O₃S

Molecular Weight: 244.314

Accurate Mass: 244.088163

Percentage Composition: C 49.16%; H 6.60%; N 11.47%; O 19.65%; S 13.12%

Biological Source: Occurs in yeast, eggs and liver. Also prod. by various other microorganisms and isol. from various higher plant sources, e.g. maize seedlings, leaves of *Raphanus sativus*

Use/Importance: Additive for cosmetic and feedstuffs

Biological Use/Importance: Bacterial growth factor for "egg white injury"

Physical Description: Fine long needles (H₂O)

Melting Point: Mp 232-233°

Optical Rotation: $[\alpha]_D^{20} +91$ (c, 1 in 0.1*M* NaOH)

Solubility: Sol. H₂O

Hazard & Toxicity: Exp. reprod. effects

Aldrich: 86164-2

Fluka: 14400

Sigma: B4639

Supelco: R47-5090

>>Derivative: S-Oxide

Synonym(s): Biotin sulfoxide

CAS Registry Number: 3376-83-8

Molecular Formula: C₁₀H₁₆N₂O₄S

Molecular Weight: 260.313

Accurate Mass: 260.083078

Percentage Composition: C 46.14%; H 6.19%; N 10.76%; O 24.58%; S 12.32%

Biological Source: Isol. from *Aspergillus niger*

Physical Description: Polymorphic plates (H₂O)

Melting Point: Mp 238 part. dec.°

Optical Rotation: $[\alpha]_D^{20} -39.5$ (c, 1.01 in 0.1*M* NaOH)

>>Derivative: Me ester

CAS Registry Number: 608-16-2

Molecular Formula: C₁₁H₁₈N₂O₃S

Molecular Weight: 258.341

Accurate Mass: 258.103813

Percentage Composition: C 51.14%; H 7.02%; N 10.84%; O 18.58%; S 12.41%

Physical Description: Cryst.

Melting Point: Mp 166.5°