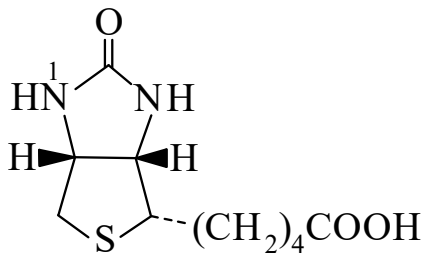
>>**Entry Name: Biotin,** INN, USAN
ENTRY UNDER REVIEW
Synonym(s): Hexahydro-2-oxo-1*H*-thieno[3,4-*d*]imidazole-4-pentanoic acid, 9Cl. Vitamin H. Coenzyme R. Vitamin B_7. **Factor S‡**



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

Molecular Formula: $C_{10}H_{16}N_2O_3S$
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: $C_{10}H_{16}N_2O_3S$
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 (H_2O)
Melting Point: Mp 232-233°
Optical Rotation: $[\alpha]_D^{20}$+91 (c, 1 in 0.1*M* NaOH)
Solubility: Sol. H_2O
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: $C_{10}H_{16}N_2O_4S$
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 (H_2O)
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: $C_{11}H_{18}N_2O_3S$
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°