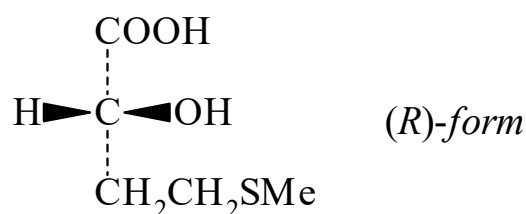




>>Entry Name: 2-Hydroxy-4-(methylthio)butanoic acid

Synonym(s): α -Hydroxy- γ -methylmercaptobutyric acid. Desmeninol, INN. Alimet



CAS Registry Number: 583-91-5

Related CAS Registry Numbers(s): 71597-86-9

Molecular Formula: $\text{C}_5\text{H}_{10}\text{O}_3\text{S}$

Molecular Weight: 150.198

Accurate Mass: 150.035065

Percentage Composition: C 39.98%; H 6.71%; O 31.96%; S 21.35%

>>Variant: (R)-form

CAS Registry Number: 39638-34-1

Extra CAS Registry Numbers(s): 71597-88-1

Molecular Formula: $\text{C}_5\text{H}_{10}\text{O}_3\text{S}$

Molecular Weight: 150.198

Accurate Mass: 150.035065

Percentage Composition: C 39.98%; H 6.71%; O 31.96%; S 21.35%

Physical Description: Oil; cryst. (EtOAc/petrol)(as dicyclohexylamine salt)

Melting Point: Mp 127-129° (dicyclohexylamine salt)

Optical Rotation: $[\alpha]_{\text{D}}^{25} +22.2$ (c, 1 in EtOH)

>>Variant: (S)-form

CAS Registry Number: 48042-96-2

Molecular Formula: $\text{C}_5\text{H}_{10}\text{O}_3\text{S}$

Molecular Weight: 150.198

Accurate Mass: 150.035065

Percentage Composition: C 39.98%; H 6.71%; O 31.96%; S 21.35%

Physical Description: Cryst. (as dicyclohexylamine salt)

Melting Point: Mp 128-129° (dicyclohexylamine salt)

Optical Rotation: $[\alpha]_{\text{D}} -22.5$ (c, 1 in EtOH)

>>Derivative: Et ester

Molecular Formula: $\text{C}_7\text{H}_{14}\text{O}_3\text{S}$

Molecular Weight: 178.252

Accurate Mass: 178.066365

Percentage Composition: C 47.17%; H 7.92%; O 26.93%; S 17.99%

Optical Rotation: $[\alpha]_{\text{D}} +20.5$ (c, 1.12 in MeOH)

>>Variant: ($\pm$)-form

CAS Registry Number: 120-91-2

Molecular Formula: $\text{C}_5\text{H}_{10}\text{O}_3\text{S}$

Molecular Weight: 150.198

Accurate Mass: 150.035065

Percentage Composition: C 39.98%; H 6.71%; O 31.96%; S 21.35%

Use/Importance: Amino acid analogue. Animal and poultry feed additive

Physical Description: Cryst. (as Zn salt)

Melting Point: Mp 250° (Zn salt)

References:

Akobe, K., *Hoppe Seyler's Z. Physiol. Chem.*, 1936, **244**, 14, (*synth*)

Kleeman, A. *et al.*, *Angew. Chem., Int. Ed.*, 1979, **18**, 797, (*synth*)

Merck Index, 11th edn., 1989, No. 5897, (*use, bibl*)

Urban, F.J. *et al.*, *J.O.C.*, 1990, **55**, 3670, (*synth, pmr*)