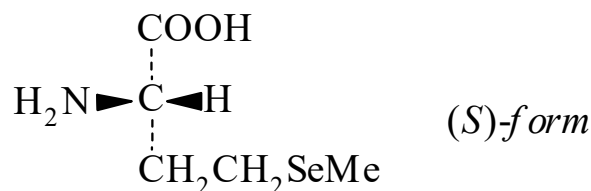




>>Entry Name: Selenomethionine

ENTRY UNDER REVIEW

Synonym(s): 2-Amino-4-(methylseleno)butanoic acid, 9CI. 2-Amino-4-(methylselenyl)butyric acid, 8CI



CAS Registry Number: 1464-42-2

Related CAS Registry Numbers(s): 7246-06-2 13091-98-0 97507-74-9 99028-81-6

Extra CAS Registry Numbers(s): 1187-56-0

Molecular Formula: $\text{C}_5\text{H}_{11}\text{NO}_2\text{Se}$

Molecular Weight: 196.107

Accurate Mass: 196.995499

Percentage Composition: C 30.62%; H 5.65%; N 7.14%; O 16.32%; Se 40.26%

Source/Synthesis: Major component of *E. coli* β -galactosidase (presumably as *S*-form). Prod. of metab. of inorganic Se by plants and bacteria

Use/Importance: Se analogue of methionine used in metab. studies. Dietary supplement for avoidance of Se deficiency in humans and ruminants. Radioprotective and UV-protectant. Putative anticancer agent

Hazard & Toxicity: LD₅₀ (rat, ipr) 11 mg/kg. Exp. fetotoxic

>>Variant: (*S*)-form

Synonym(s): L-form

CAS Registry Number: 3211-76-5

Molecular Formula: $\text{C}_5\text{H}_{11}\text{NO}_2\text{Se}$

Molecular Weight: 196.107

Accurate Mass: 196.995499

Percentage Composition: C 30.62%; H 5.65%; N 7.14%; O 16.32%; Se 40.26%

Use/Importance: ⁷⁵Se labelled cpd. used as a radioactive agent and diagnostic aid (*Selenomethionine 75 Se*, INN, JAN, USAN, *Sethotope*)

Optical Rotation: $[\alpha]_{\text{D}}^{25} +18.1$ (c, 1.22 in 1M HCl)

Solubility: BERDY SOL: Sol. H₂O

UV: [neutral] λ_{max} (H₂O) (Berdy)

Hazard & Toxicity: BERDY HAZD : LD₅₀ (mus, ipr) 11 mg/kg

Sigma: S3132

Other: ACROS 25996-2500

>>Derivative: Se-Me

Synonym(s): 2-Amino-4-(dimethylseleno)butanoic acid. Se-Methylselenomethionine

CAS Registry Number: 52553-55-6

Extra CAS Registry Numbers(s): 7728-97-4

Molecular Formula: $\text{C}_6\text{H}_{14}\text{NO}_2\text{Se}^{(+)}$

Molecular Weight: 211.142

Accurate Mass: 212.018974

Percentage Composition: C 34.13%; H 6.68%; N 6.63%; O 15.16%; Se 37.40%

Biological Source: Occurs in *Astragalus*, *Trifolium* and *Lolium* spp.

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

CAS Registry Number: 2578-28-1

Molecular Formula: $\text{C}_5\text{H}_{11}\text{NO}_2\text{Se}$

Molecular Weight: 196.107

Accurate Mass: 196.995499

Percentage Composition: C 30.62%; H 5.65%; N 7.14%; O 16.32%; Se 40.26%

Physical Description: Hexagonal sheets or plates with metallic lustre (MeOH aq.)

Melting Point: Mp 265 dec.°

Fluka: 84925

Sigma: S3875

Other: ACROS 24077-5000

References: