



>>Entry Name: N-Glycylserine

Extra CAS Registry Numbers(s): 687-38-7

$\text{H}_2\text{NCH}_2\text{CONHCH}(\text{COOH})\text{CH}_2\text{OH}$

Molecular Formula: $\text{C}_5\text{H}_{10}\text{N}_2\text{O}_4$

Molecular Weight: 162.145

Accurate Mass: 162.064058

Percentage Composition: C 37.04%; H 6.22%; N 17.28%; O 39.47%

>>Variant: D-form

CAS Registry Number: 82660-87-5

Molecular Formula: $\text{C}_5\text{H}_{10}\text{N}_2\text{O}_4$

Molecular Weight: 162.145

Accurate Mass: 162.064058

Percentage Composition: C 37.04%; H 6.22%; N 17.28%; O 39.47%

Optical Rotation: $[\alpha]_{\text{D}}^{25} +9.2$ (c, 5 in H_2O)

>>Variant: L-form

CAS Registry Number: 7361-43-5

Molecular Formula: $\text{C}_5\text{H}_{10}\text{N}_2\text{O}_4$

Molecular Weight: 162.145

Accurate Mass: 162.064058

Percentage Composition: C 37.04%; H 6.22%; N 17.28%; O 39.47%

Melting Point: Mp 197-199 dec. $^{\circ}$

Optical Rotation: $[\alpha]_{\text{D}}^{25} -7.2$ (c, 2 in H_2O)

Sigma: G3252

>>Derivative: Z-Gly-L-Ser-OMe

Molecular Formula: $\text{C}_{14}\text{H}_{18}\text{N}_2\text{O}_6$

Molecular Weight: 310.306

Accurate Mass: 310.116488

Percentage Composition: C 54.19%; H 5.85%; N 9.03%; O 30.94%

Physical Description: Solid (EtOAc/hexane)

Melting Point: Mp 94-95 $^{\circ}$

Optical Rotation: $[\alpha]_{\text{D}}^{27} +25.3$ (c, 1.02 in CHCl_3)

>>Derivative: Z-Gly-L-Ser, benzyl ester

Molecular Formula: $\text{C}_{20}\text{H}_{22}\text{N}_2\text{O}_6$

Molecular Weight: 386.404

Accurate Mass: 386.147788

Percentage Composition: C 62.17%; H 5.74%; N 7.25%; O 24.84%

Physical Description: Cryst. (EtOAc)

Melting Point: Mp 149 $^{\circ}$

Optical Rotation: $[\alpha]_{\text{D}}^{26} +4.7$ (c, 6.1 in AcOH)

>>Derivative: Z-Gly-L-Ser-NHNH₂

Molecular Formula: $\text{C}_{13}\text{H}_{18}\text{N}_4\text{O}_5$

Molecular Weight: 310.309

Accurate Mass: 310.127721

Percentage Composition: C 50.32%; H 5.85%; N 18.06%; O 25.78%

Physical Description: Cryst.

Melting Point: Mp 224 $^{\circ}$

Optical Rotation: $[\alpha]_{\text{D}}^{23} -5$ (c, 1 in DMF)

References:

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Moore, J.A. *et al.*, *J.A.C.S.*, 1954, **76**, 2884, (*synth*)

Guttmann, St., *Helv. Chim. Acta*, 1961, **44**, 1713

Fölsch, G., *Acta Chem. Scand.*, 1966, **20**, 459

Hiskey, R.G. *et al.*, *J.O.C.*, 1967, **32**, 97

Noda, K. *et al.*, *Bull. Chem. Soc. Jpn.*, 1970, **43**, 1834, (*synth*)