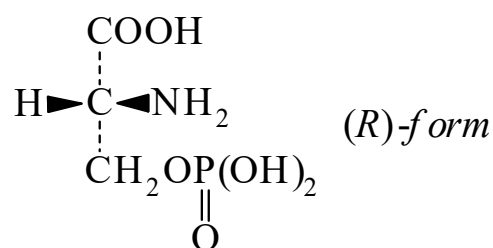




>>Entry Name: ***O*-Phosphoserine**

Synonym(s): Serine dihydrogen phosphate, gcl. 2-Amino-3-hydroxypropanoyl 3-phosphate. **Phosphoserine**‡



CAS Registry Number: 7331-08-0

Molecular Formula: C₃H₈NO₆P

Molecular Weight: 185.073

Accurate Mass: 185.008926

Percentage Composition: C 19.47%; H 4.36%; N 7.57%; O 51.87%; P 16.74%

Biological Source: Found in casein and mammalian plasma. Occurs in brain

Use/Importance: Stimulant

>>Variant: (*R*)-form

Synonym(s): D-form

CAS Registry Number: 73913-63-0

Molecular Formula: C₃H₈NO₆P

Molecular Weight: 185.073

Accurate Mass: 185.008926

Percentage Composition: C 19.47%; H 4.36%; N 7.57%; O 51.87%; P 16.74%

Source/Synthesis: Membrane metabolite

Physical Description: Cryst.

Melting Point: Mp 170-173°

Optical Rotation: $[\alpha]_{\text{D}}^{21} -15.6$ (c, 3.2 in 2*M* HCl)

Sigma: P5506

>>Variant: (*S*)-form

Synonym(s): L-form. **Dexfosfoserine**, INN

CAS Registry Number: 407-41-0

Molecular Formula: C₃H₈NO₆P

Molecular Weight: 185.073

Accurate Mass: 185.008926

Percentage Composition: C 19.47%; H 4.36%; N 7.57%; O 51.87%; P 16.74%

Use/Importance: Used in combination with L-glutamine and vitamin B₁₂ as a roborant (*Vitasprint B₁₂*, *Fosforina B₁₂*)

Physical Description: Cryst. (EtOH aq.)

Melting Point: Mp 175-176 dec.° (167°)

Optical Rotation: $[\alpha]_{\text{D}}^{21} +16.2$ (c, 3 in 2*M* HCl) (c, 4 in 2*M* HCl)

Aldrich: 44422-7

Fluka: 79715

Rare Chemicals Library: S36482-7

Sigma: P0878

>>Variant: (±)-form

Synonym(s): Energoserina. Foserin. Monoserina. Neuroserina. Serinfosfan. **Serophen**‡

CAS Registry Number: 17885-08-4

Molecular Formula: C₃H₈NO₆P

Molecular Weight: 185.073

Accurate Mass: 185.008926

Percentage Composition: C 19.47%; H 4.36%; N 7.57%; O 51.87%; P 16.74%

Physical Description: Cryst. (H₂O or EtOH aq.)

Melting Point: Mp 186°. Mp 153-156° (monohydrate)

Fluka: 79710

Sigma: P0753