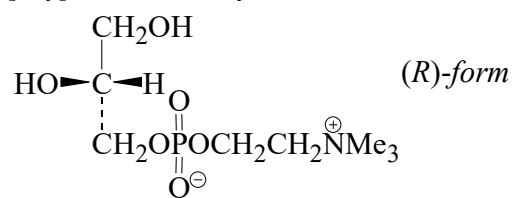




>>Entry Name: Glycerylphosphorylcholine

Synonym(s): 2-[[[(2,3-Dihydroxypropoxy)hydroxyphosphinyl]oxy]-*N,N,N*-trimethylethanaminium inner salt, 9Cl. Choline glycerophosphate



CAS Registry Number: 563-24-6

Related CAS Registry Numbers(s): 71861-27-3 73289-29-9

Molecular Formula: C₈H₂₀NO₆P

Molecular Weight: 257.223

Accurate Mass: 257.102826

Percentage Composition: C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

Biological Source: Isol. from beef pancreas. Synth. from egg yolk lecithin

>>Variant: (R)-form

Synonym(s): Choline alfoscerate, INN. *sn*-Glycero-3-phosphocholine

CAS Registry Number: 28319-77-9

Molecular Formula: C₈H₂₀NO₆P

Molecular Weight: 257.223

Accurate Mass: 257.102826

Percentage Composition: C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

Biological Use/Importance: Parasympathomimetic agent. Reported to be a precursor of acetylcholine. Used in the treatment of Alzheimer's disease and other dementias.

Involved in osmoregulation by renal medullary cells

Physical Description: Hygroscopic viscous liq. or solid

Development Status: Lunched 1990

Optical Rotation: $[\alpha]_D^{23} -2.85$ (c, 2.2 in H₂O)

>>Derivative: Compd. with CdCl₂

CAS Registry Number: 64681-08-9

Use/Importance: Form of choline glycerophosphate easier to handle than free compd.

Physical Description: Needles (EtOH)

Melting Point: Mp 100-102°

Optical Rotation: $[\alpha]_D^{24} -1.4$ (c, 5.5 in H₂O)

Other Data: Sinters >97°

>>Variant: (S)-form

Synonym(s): *sn*-Glycero-1-phosphocholine

CAS Registry Number: 4217-84-9

Molecular Formula: C₈H₂₀NO₆P

Molecular Weight: 257.223

Accurate Mass: 257.102826

Percentage Composition: C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

Optical Rotation: $[\alpha]_{546}^{22} +3$ (c, 2.5 in H₂O)

Other Data: Intermediate for synth of 'unnatural' 1-*sn*-phosphatidylcholines

>>Variant: (±)-form

CAS Registry Number: 34688-34-1

Molecular Formula: C₈H₂₀NO₆P

Molecular Weight: 257.223

Accurate Mass: 257.102826

Percentage Composition: C 37.36%; H 7.84%; N 5.45%; O 37.32%; P 12.04%

Melting Point: Mp 152-153°

Solubility: Sol. H₂O, EtOH, MeOH

Other Data: Described as visc. liq. (Baer) and v. hygroscopic powder (Mushika)

References: