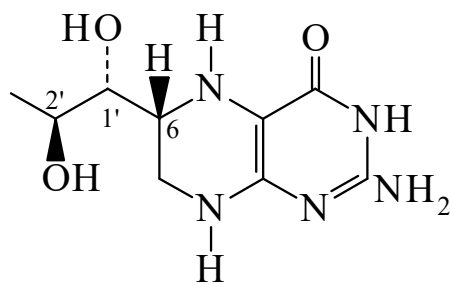




>>Entry Name: 5,6,7,8-Tetrahydrobiopterin

Synonym(s): 2-Amino-6-(1,2-dihydroxypropyl)-5,6,7,8-tetrahydro-4(1*H*)-pteridinone, 9Cl



CAS Registry Number: 17528-72-2

Related CAS Registry Numbers(s): 27070-47-9 62961-57-3 62989-33-7 69056-38-8 69056-39-9 71031-45-3 71074-53-8 83023-72-7 83709-59-5 90366-07-7 99630-30-5 105119-62-8 105119-63-9

Molecular Formula: C₉H₁₅N₅O₃

Molecular Weight: 241.249

Accurate Mass: 241.11749

Percentage Composition: C 44.81%; H 6.27%; N 29.03%; O 19.90%

>>Variant: (1*R*,2'*S*,6*R*)-form

Synonym(s): L-*erythro*-form. **Sapropterin**, INN. Biopten. Sun 0588

CAS Registry Number: 99630-29-2

Molecular Formula: C₉H₁₅N₅O₃

Molecular Weight: 241.249

Accurate Mass: 241.11749

Percentage Composition: C 44.81%; H 6.27%; N 29.03%; O 19.90%

Use/Importance: Cofactor for phenylalanine, tyrosine and tryptophan hydroxylases which influences the biosynth. of neurotransmitting catecholamines. Used for treatment of hyperphenylalaninemia

Development Status: Launched 1992 (Japan)

pKa Value: p*K*_{a1} 1.29; p*K*_{a2} 5.02; p*K*_{a3} 10.77

Other Data: Other stereoisomers known

>>Derivative: Hydrochloride (1:2)

Synonym(s): Biopten

CAS Registry Number: 69056-38-8

Physical Description: Needles (HCl/EtOH)

Melting Point: Mp 245-246 dec.°

Optical Rotation: [α]_D²⁵ -6.81 (c, 0.67 in 0.1*M* HCl)

Sigma: T4425

>>Derivative: Hydrochloride (2:3)

CAS Registry Number: 90366-07-7

Melting Point: Mp 300 dec.°

Optical Rotation: [α]_D²⁰ -9.8

>>Derivative: Tetra-Ac

CAS Registry Number: 81873-18-9

Molecular Formula: C₁₇H₂₃N₅O₇

Molecular Weight: 409.398

Percentage Composition: C 49.87%; H 5.66%; N 17.11%; O 27.36%

Physical Description: Cryst. (MeOH)

Melting Point: Mp 292 dec.°

Optical Rotation: [α]_D²⁰ -144