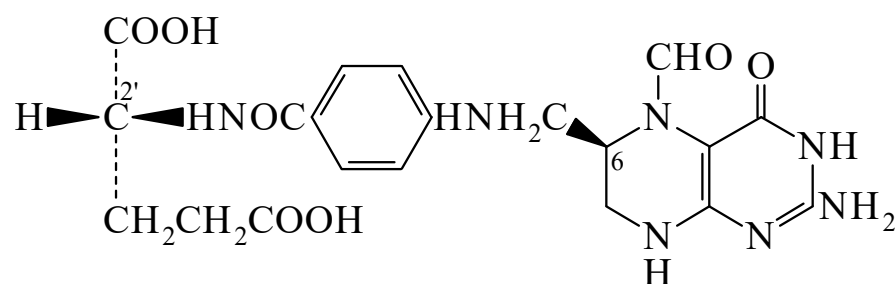




>>Entry Name: Folinic acid

Synonym(s): *N*-[4-[(2-Amino-5-formyl-1,4,5,6,7,8-hexahydro-4-oxo-6-pteridiny)methyl]amino]benzoylglutamic acid, 9Cl. 5-Formyl-5,6,7,8-tetrahydrofolic acid. Citrovorum factor. Leucovorin. Formylpteroylglutamic acid



CAS Registry Number: 58-05-9

Related CAS Registry Numbers(s): 6035-45-6

Molecular Formula: C₂₀H₂₃N₇O₇

Molecular Weight: 473.444

Accurate Mass: 473.165898

Percentage Composition: C 50.74%; H 4.90%; N 20.71%; O 23.66%

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

Synonym(s): (-)-L-form

CAS Registry Number: 68538-85-2

Molecular Formula: C₂₀H₂₃N₇O₇

Molecular Weight: 473.444

Accurate Mass: 473.165898

Percentage Composition: C 50.74%; H 4.90%; N 20.71%; O 23.66%

Biological Source: Occurs in yeast, insects etc.

Use/Importance: Active form of folic acid in the body

Physical Description: Light yellow cryst. + 3H₂O

Melting Point: Mp 248-250 dec.°

Optical Rotation: [α]_D²⁵+16.8 (aq. bicarbonate)

Other Data: This is the biologically active natural stereoisomer. The "(-)-L" description used in the biochemical literature is rather misleading

>>Derivative: Ca salt

Synonym(s): Calcium levofolinate, INN. Levoleucovorin calcium, USAN. Isovorin. CL 307782

CAS Registry Number: 80433-71-2

Optical Rotation: [α]_D²⁰-15.1 (c, 1.82 in H₂O)

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

Synonym(s): (+)-L-form

Molecular Formula: C₂₀H₂₃N₇O₇

Molecular Weight: 473.444

Accurate Mass: 473.165898

Percentage Composition: C 50.74%; H 4.90%; N 20.71%; O 23.66%

>>Derivative: Ca salt

Optical Rotation: [α]_D²⁰+28.3 (c, 3.53 in H₂O)

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

Synonym(s): *dl*-L-form

Molecular Formula: C₂₀H₂₃N₇O₇

Molecular Weight: 473.444

Accurate Mass: 473.165898

Percentage Composition: C 50.74%; H 4.90%; N 20.71%; O 23.66%

Use/Importance: Antidote to folic acid antagonists such as methotrexate e.g. in cancer chemotherapy

Physical Description: Cryst.

Melting Point: Mp 240-250 dec.°

Solubility: Spar. sol. H₂O to give acid soln. which slowly decs.

pKa Value: p*K*_{a1} 3.2; p*K*_{a2} 4.8; p*K*_{a3} 10.4

Other Data: This is the usual coml. form, consisting of a mixt. of diastereoisomers. Used as a Ca salt