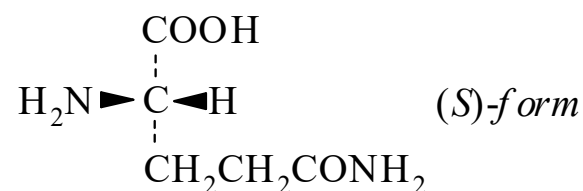




>>Entry Name: Glutamine, 9CI

ENTRY UNDER REVIEW

Synonym(s): 2,5-Diamino-5-oxopentanoic acid. Gln. γ -Glutamine. NSC 97925. Glutamic acid 5-amide



CAS Registry Number: 6899-04-3

Molecular Formula: $\text{C}_5\text{H}_{10}\text{N}_2\text{O}_3$

Molecular Weight: 146.146

Accurate Mass: 146.069143

Percentage Composition: C 41.09%; H 6.90%; N 19.17%; O 32.84%

Use/Importance: Dietary supplement, nutrient

Calculated Log P Data: Log P -3.46 (calc)

Rare Chemicals Library: S57911-4

>>Variant: (R)-form

Synonym(s): D-form

CAS Registry Number: 5959-95-5

Molecular Formula: $\text{C}_5\text{H}_{10}\text{N}_2\text{O}_3$

Molecular Weight: 146.146

Accurate Mass: 146.069143

Percentage Composition: C 41.09%; H 6.90%; N 19.17%; O 32.84%

Melting Point: Mp 186-188°

Optical Rotation: $[\alpha]_{\text{D}}^{20} -7.9$ (c, 4 in H_2O)

Fluka: 49410

Sigma: G9003

>>Variant: (S)-form

Synonym(s): L-form. **Levoglutamide**, INN. Energulut. Glutaven. Iperphos. Memoril. FEMA 3684. Many other names

CAS Registry Number: 56-85-9

Molecular Formula: $\text{C}_5\text{H}_{10}\text{N}_2\text{O}_3$

Molecular Weight: 146.146

Accurate Mass: 146.069143

Percentage Composition: C 41.09%; H 6.90%; N 19.17%; O 32.84%

Biological Source: Widely distributed in plants, e.g. beetroot

Use/Importance: Flavouring ingredient. Dietary supplement

Physical Description: Needles (EtOH aq.)

Melting Point: Mp 184-185 dec.°

Optical Rotation: $[\alpha]_{\text{D}}^{19} +9.2$ (H_2O). $[\alpha]_{\text{D}} +46.5$ (5M HCl)

Solubility: Spar. sol. H_2O (3.6 g/100 g at 25°), EtOH

pKa Value: $\text{p}K_{\text{a}1}$ 2.17; $\text{p}K_{\text{a}2}$ 9.01 (25°, 0.1M KNO_3)

Other Data: Isoelectric point 5.65. Sweet taste

Hazard & Toxicity: LD₅₀ (rat, orl) 7500 mg/kg. Exp. reprod. effects (very large dose)

Aldrich: W36840-7

Fluka: 49420

Sigma: G7513

>>Derivative: Me ester

CAS Registry Number: 32668-14-7

Molecular Formula: $\text{C}_6\text{H}_{12}\text{N}_2\text{O}_3$

Molecular Weight: 160.172

Accurate Mass: 160.084793

Percentage Composition: C 44.99%; H 7.55%; N 17.49%; O 29.97%

Physical Description: Cryst. (MeOH/Et₂O) (as hydrochloride)

Melting Point: Mp 142° (hydrochloride)