



Molecular Formula: C₆H₁₄N₄O₂

Molecular Weight: 174.202

Accurate Mass: 174.111676

Percentage Composition: C 41.37%; H 8.10%; N 32.16%; O 18.37%

Biological Source: Found in seeds/shoots of pine, fir, acacia, arachis etc. and in many proteins

Use/Importance: Diagnostic aid (pituitary function determination), ammonia detoxicant. Reagent for the fluorimetric anal. of reducing sugars by hplc. Dietary supplement, nutrient

Physical Description: Plates or prisms + 2H₂O (H₂O), plates (EtOH)

Melting Point: Mp 207°. Mp 244 dec.° (anhyd. 105°)

Optical Rotation: [α]_D +21.8 (H₂O). [α]_D²⁵ +48.1 (c, 1 in 5M HCl)

Solubility: Sol. H₂O (15.0g/100g at 21°)

pKa Value: pK_{a1} 2.17; pK_{a2} 9.04; pK_{a3} 12.48 (guanido)

Other Data: Isoelectric point 10.76. Bitter taste. *N*-Protected derivs. useful in peptide synth. have been listed alphabetically elsewhere

Aldrich: A9240-6

Fluka: 11010

Sigma: A5006

>>Derivative: Hydrochloride

Synonym(s): Arginine hydrochloride, USAN

CAS Registry Number: 1119-34-2

Extra CAS Registry Numbers(s): 15595-35-4

Use/Importance: Dietary supplement, nutrient

Melting Point: Mp 222 dec.° (235°)

Optical Rotation: [α]_D²⁰ +12.1 (H₂O)

Hazard & Toxicity: LD₅₀ (rat, orl) 12000 mg/kg. Exp. teratogen

Aldrich: A9260-0

Fluka: 11040

Sigma: A1427

>>Derivative: L-Glutamate salt

Synonym(s): Arginine glutamate, BAN, JAN, USAN. Modumate

CAS Registry Number: 4320-30-3

Biological Use/Importance: Ammonia detoxicant

>>Derivative: Butanoate salt

Synonym(s): Arginine butyrate, USAN. VX 105

Extra CAS Registry Numbers(s): 83951-84-2

Biological Use/Importance: Investigated for the treatment of β-haemoglobinopathies. Antineoplastic agent *in vitro*

Physical Description: Solid + H₂O

Melting Point: Mp 145°

Other Data: Prodrug of Butanoic acid [HCX15-D](#)

>>Derivative: Mono(2-mercaptoethanesulfonate)

Synonym(s): Argimesna, INN

CAS Registry Number: 106854-46-0

Molecular Formula: C₈H₂₀N₄O₅S₂

Molecular Weight: 316.402

Accurate Mass: 316.087511

Percentage Composition: C 30.37%; H 6.37%; N 17.71%; O 25.28%; S 20.27%

Use/Importance: Antidote

>>Derivative: Me ester

CAS Registry Number: 2577-94-8

Molecular Formula: C₇H₁₆N₄O₂

Molecular Weight: 188.229

Accurate Mass: 188.127326

Percentage Composition: C 44.67%; H 8.57%; N 29.77%; O 17.00%

Physical Description: Syrup