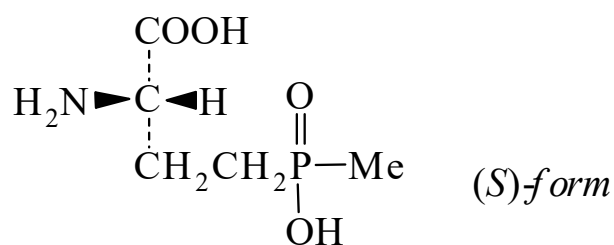




>>Entry Name: Glufosinate, BSI, ISO

Synonym(s): 2-Amino-4-(hydroxymethylphosphinyl)butanoic acid, 9CI. 2-Amino-4-(methylphosphino)butyric acid. Homoalanin-4-yl(methyl)phosphinic acid



CAS Registry Number: 51276-47-2

Related CAS Registry Numbers(s): 73679-07-9 77182-82-2 104361-75-3

Molecular Formula: C₅H₁₂NO₄P

Molecular Weight: 181.128

Accurate Mass: 181.050396

Percentage Composition: C 33.16%; H 6.68%; N 7.73%; O 35.33%; P 17.10%

>>Variant: (S)-form

Synonym(s): L-form. Phosphinothricin

CAS Registry Number: 35597-44-5

Molecular Formula: C₅H₁₂NO₄P

Molecular Weight: 181.128

Accurate Mass: 181.050396

Percentage Composition: C 33.16%; H 6.68%; N 7.73%; O 35.33%; P 17.10%

Biological Source: N-Terminal residue of Bilanafos [CKV48-G](#)

Use/Importance: Shows herbicidal and acaricidal activity. Active glutamine synthetase inhibitor

Physical Description: Cryst. (EtOH)

Melting Point: Mp 208-211°

Optical Rotation: $[\alpha]_{\text{D}}^{19} +16$ (c, 0.7 in H₂O) (99.4% ee)

Solubility: BERDY SOL: Sol. H₂O, MeOH; poorly sol. hexane

UV: [neutral] λ_{max} (H₂O) (Derep) [neutral] λ_{max} (H₂O) (Berdy)

Other Data: Diastereoisomers at P have been recognised but not characterised

>>Derivative: Hydrochloride

CAS Registry Number: 73777-49-8

Melting Point: Mp 185-187°

Optical Rotation: $[\alpha]_{\text{D}}^{19} +20.5$ (c, 1.976 in 1M HCl) (97% ee)

>>Variant: (±)-form

CAS Registry Number: 53369-07-6

Molecular Formula: C₅H₁₂NO₄P

Molecular Weight: 181.128

Accurate Mass: 181.050396

Percentage Composition: C 33.16%; H 6.68%; N 7.73%; O 35.33%; P 17.10%

Physical Description: Cryst. (EtOH)

Melting Point: Mp 241-242°

Other Data: Forms a monohydrate

>>Derivative: Hydrochloride

CAS Registry Number: 59542-49-3

Melting Point: Mp 195-198°

>>Derivative: Ammonium salt

Synonym(s): Glufosinate-ammonium. Basta. Buster. Finale. Ignite

CAS Registry Number: 77182-82-2

Use/Importance: Herbicide. Glutamine synthetase inhibitor

Solubility: Sol. H₂O; spar. sol. org. solvs.

Hazard & Toxicity: LD₅₀ (male rat, orl) 2000mg/kg

Sigma: P9186