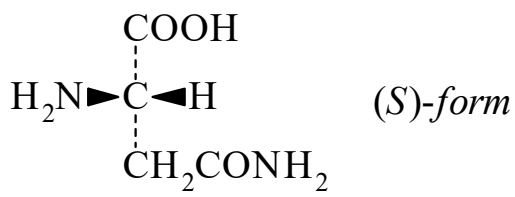
>>**Entry Name: Asparagine,** 9CI
ENTRY UNDER REVIEW
Synonym(s): 2,4-Diamino-4-oxobutanoic acid. Aspartic acid β-monoamide. β-Asparagine. Asparamide. Altheine. Asn



(*S*)-*form*

CAS Registry Number: 7006-34-0
Related CAS Registry Numbers(s): 5794-13-8

Molecular Formula: $C_4H_8N_2O_3$
Molecular Weight: 132.119
Accurate Mass: 132.053493
Percentage Composition: C 36.36%; H 6.10%; N 21.20%; O 36.33%
General Statement: Derivs. labelled *N* (here and in 9CI) refer to those subst. on the amide (or N^4) nitrogen; N^2 refers to subst. on amino group

>>**Variant:** (*R*)-form
Synonym(s): D-form

CAS Registry Number: 2058-58-4
Extra CAS Registry Numbers(s): 5794-24-1
Molecular Formula: $C_4H_8N_2O_3$
Molecular Weight: 132.119
Accurate Mass: 132.053493
Percentage Composition: C 36.36%; H 6.10%; N 21.20%; O 36.33%
Physical Description: Cryst. + $1H_2O$
Melting Point: Mp 234-235°
Optical Rotation: $[\alpha]_D^{15}$+5.4 (H_2O)
Aldrich: 44159-7
Fluka: 11155

>>**Derivative:** *N*-Hydroxy

CAS Registry Number: 36244-81-2
Molecular Formula: $C_4H_8N_2O_4$
Molecular Weight: 148.118
Accurate Mass: 148.048408
Percentage Composition: C 32.44%; H 5.44%; N 18.91%; O 43.21%
Physical Description: Cryst. (EtOH aq.)
Optical Rotation: $[\alpha]_D^{25}$–27.7 (c, 2 in HCl aq.)
Sigma: A9009

>>**Variant:** (*S*)-form
Synonym(s): L-form

CAS Registry Number: 70-47-3

Molecular Formula: $C_4H_8N_2O_3$
Molecular Weight: 132.119
Accurate Mass: 132.053493
Percentage Composition: C 36.36%; H 6.10%; N 21.20%; O 36.33%
Biological Source: Widely distributed in the plant kingdom. Isol. from asparagus, beetroot, peas, beans, etc.
Use/Importance: One of the nonessential amino acids. Dietary supplement, nutrient
Physical Description: Rhombic hemihedral cryst. + $1H_2O$ (H_2O)
Melting Point: Mp 234-235° (rapid heat). Mp 226-227 dec.° (slow heat)
Optical Rotation: $[\alpha]_D^{25}$–7.4 (c, 2 in H_2O). $[\alpha]_D$ +33.2 (3*M* HCl)
Solubility: Mod. sol. H_2O (3.1g/100g at 25°)
pKa Value: pK_{a2} 8.6 (NH_2)
Other Data: Isoelectric point 5.41. Bitter taste
Aldrich: A9300-3
Fluka: 11149
Sigma: A0884