



>>Entry Name: 5-Amino-4-oxopentanoic acid, 9CI

Synonym(s): 5-Aminolaevulinic acid. δ -Aminolevulinic acid. Levulan

CAS Registry Number: 106-60-5

Related CAS Registry Numbers(s): 33320-16-0 79416-27-6

$\text{H}_2\text{NCH}_2\text{COCH}_2\text{CH}_2\text{COOH}$

Molecular Formula: $\text{C}_5\text{H}_9\text{NO}_3$

Molecular Weight: 131.131

Accurate Mass: 131.058244

Percentage Composition: C 45.80%; H 6.92%; N 10.68%; O 36.60%

Biological Source: Present in living tissues; in animals, yeast and some bacteria is biosynthesised from succinyl coenzyme A, in plants and other bacteria from glutamic acid.

Produced by *Rhodobacter sphaeroides* by fermentation

Biological Use/Importance: Photosensitiser used in photodynamic therapy and diagnosis of actinic keratosis and hepatic tumours. Exhibits herbicidal activity in higher concentration and shows plant growth regulating-promoting effect in low concentration. Biochem. precursor of porphyrins, corrins and Porphobilinogen [CRS83-V](#)

Physical Description: Cryst. (EtOAc)

Development Status: Approved by FDA (1999)

Melting Point: Mp 118-119°

pKa Value: $\text{p}K_{\text{a}1}$ 4.05; $\text{p}K_{\text{a}2}$ 8.9 (22°)

>>Derivative: Hydrochloride

Synonym(s): Aminolevulinic acid hydrochloride, USAN. Levulan

CAS Registry Number: 5451-09-2

Physical Description: Long needles (MeOH/Et₂O)

Melting Point: Mp 156-158 (144-147°) dec.°

Aldrich: A5990-5

Fluka: 8340

Sigma: A7793

>>Derivative: *N*-Ac

CAS Registry Number: 20238-92-0

Molecular Formula: $\text{C}_7\text{H}_{11}\text{NO}_4$

Molecular Weight: 173.168

Accurate Mass: 173.068809

Percentage Composition: C 48.55%; H 6.40%; N 8.09%; O 36.96%

Physical Description: Cryst. (EtOAc)

Melting Point: Mp 97°

>>Derivative: *N*-Benzoyl

CAS Registry Number: 102872-00-4

Molecular Formula: $\text{C}_{12}\text{H}_{13}\text{NO}_4$

Molecular Weight: 235.239

Accurate Mass: 235.084459

Percentage Composition: C 61.27%; H 5.57%; N 5.95%; O 27.21%

Physical Description: Prisms (EtOAc)

Melting Point: Mp 118-119°

References: