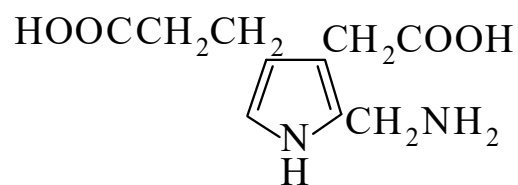




>>Entry Name: **Porphobilinogen**

Synonym(s): 5-(Aminomethyl)-4-(carboxymethyl)-1*H*-pyrrole-3-propanoic acid, 9CI



CAS Registry Number: 487-90-1

Molecular Formula: C₁₀H₁₄N₂O₄

Molecular Weight: 226.232

Accurate Mass: 226.095358

Percentage Composition: C 53.09%; H 6.24%; N 12.38%; O 28.29%

Biological Source: Isol. from urine of patients suffering from certain types of porphyria

Use/Importance: Key monopyrrolic intermed. in porphyrin, chlorophyll and vitamin B₁₂ biosynth.

Physical Description: Cryst. + 1H₂O (H₂O)

Melting Point: Mp 167°. Mp 175-180 dec.°

Other Data: Unstable in air and in aq. soln.; turns pink. On heating in acid (in air) forms a mixt. of Uroporphyrins I, II, III and IV

Fluka: 81480

Sigma: P4435

>>Derivative: Lactam

CAS Registry Number: 3468-98-2

Molecular Formula: C₁₀H₁₂N₂O₃

Molecular Weight: 208.216

Accurate Mass: 208.084793

Percentage Composition: C 57.69%; H 5.81%; N 13.45%; O 23.05%

Physical Description: Cryst. (AcOH aq.)

Other Data: Dec. >325°

Rare Chemicals Library: S29562-0

References:

- Rimington, C. *et al.*, *Nature (London)*, 1955, **175**, 630, (*isol*)
Jackson, A.H. *et al.*, *Can. J. Chem.*, 1957, **35**, 717, (*synth*)
Bezold, G. *et al.*, *Angew. Chem., Int. Ed.*, 1967, **6**, 883, (*rev*)
Battersby, A.R. *et al.*, *Chem. Comm.*, 1973, 1546
Jones, M.I. *et al.*, *Chem. Comm.*, 1976, 472, (*synth*)
Kenner, G.W. *et al.*, *J.C.S. Perkin 1*, 1977, 332, (*synth*)
Gibbs, P.N.B. *et al.*, *Biochem. J.*, 1986, **236**, 447, (*biosynth*)
Blanche, F. *et al.*, *Angew. Chem., Int. Ed.*, 1995, **34**, 383, (*rev*)
Bobal, P. *et al.*, *Trends Org. Chem.*, 1997, **6**, 125-144, (*rev, synth*)