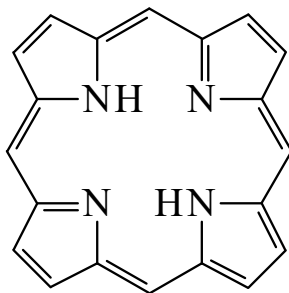




>>Entry Name: Porphyrin

Synonym(s): Porphin



CAS Registry Number: 101-60-0

Molecular Formula: C₂₀H₁₄N₄

Molecular Weight: 310.357

Accurate Mass: 310.121846

Percentage Composition: C 77.40%; H 4.55%; N 18.05%

Use/Importance: Parent compd. from which all porphyrins are formally derived

Physical Description: Purple or dark red leaflets (CHCl₃)

Melting Point: Mp 360°

Solubility: Sol. Py

pKa Value: pK_a 35-36 (MeCN)

Other Data: The synthesis reported by Neya *et al* gives only 0.9% yield but is easily operated on a large scale from pyrrole and formaldehyde. Tautomeric with the NH atoms highly mobile. Amphoteric

Sigma: P7259

References:

Fischer, H. *et al.*, *Annalen*, 1935, **521**, 157, (*synth*)

Krol, S., *J.O.C.*, 1959, **24**, 2065, (*synth, uv*)

Longo, F.R. *et al.*, *J. Het. Chem.*, 1975, **12**, 1305, (*synth*)

Gladkov, L.L. *et al.*, *J. Mol. Struct.*, 1978, **47**, 463, (*ir*)

Frydman, L. *et al.*, *J.A.C.S.*, 1989, **111**, 7001, (*pmr, cmr*)

Neya, S. *et al.*, *J. Het. Chem.*, 1993, **30**, 549, (*synth*)

Connolly, J.S. *et al.*, *J. Phys. Chem.*, 1993, **97**, 7024, (*uv*)

Braun, J. *et al.*, *Angew. Chem., Int. Ed.*, 1994, **33**, 2215, (*uv, props*)