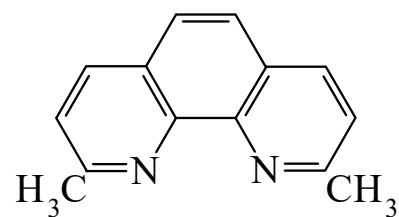




>>Entry Name: 2,9-Dimethyl-1,10-phenanthroline

Synonym(s): Neocuproine



CAS Registry Number: 484-11-7

Related CAS Registry Numbers(s): 7296-20-0 41066-08-4

Molecular Formula: C₁₄H₁₂N₂

Molecular Weight: 208.262

Accurate Mass: 208.100048

Percentage Composition: C 80.74%; H 5.81%; N 13.45%

Use/Importance: Used as a diagnostic aid in blood sugar determinations. Used as 0.02-0.1% soln. in EtOH for extraction-photometric detn. of Cu(I) ($\lambda_{\max}$ 545 nm, ϵ 7900, pH 5-10 isopentanol), indirect detn. of S²⁽⁻⁾, I⁽⁻⁾

Physical Description: Cryst. + ½H₂O

Melting Point: Mp 165° (158-160°)

Solubility: Sol. EtOH

pKa Value: pK_a 5.85 (25°, 0.1M KCl)

Fluka: 72080

Sigma: N1501

>>Derivative: N-Oxide

CAS Registry Number: 118896-77-8

Molecular Formula: C₁₄H₁₂N₂O

Molecular Weight: 224.262

Accurate Mass: 224.094963

Percentage Composition: C 74.98%; H 5.39%; N 12.49%; O 7.13%

Physical Description: Yellow cryst. + 2H₂O

Melting Point: Mp 131-132 dec.°

References:

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Gahler, A.R., *Anal. Chem.*, 1954, **26**, 577, (*detn, Cu*)
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Madija, K., *J. Prakt. Chem.*, 1962, **17**, 97, (*synth*)
Lindsey, J.W. *et al.*, *Talanta*, 1969, **16**, 414, (*detn, Cu*)
Yamamoto, Y. *et al.*, *Anal. Chim. Acta*, 1974, **69**, 321, (*detn, I⁽⁻⁾*)
Bhat, S.R. *et al.*, *Anal. Chim. Acta*, 1979, **108**, 293; 1981, **128**, 263, (*detn, S²⁽⁻⁾*)
Rollick, K.L. *et al.*, *J.O.C.*, 1982, **47**, 435, (*pmr, cmr*)
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