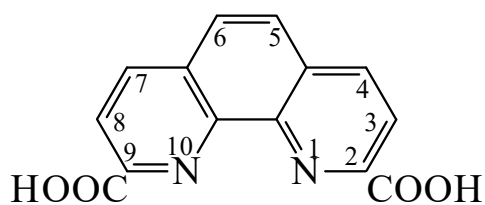




>>Entry Name: 1,10-Phenanthroline-2,9-dicarboxylic acid



CAS Registry Number: 57709-61-2

Molecular Formula: C₁₄H₈N₂O₄

Molecular Weight: 268.228

Accurate Mass: 268.048408

Percentage Composition: C 62.69%; H 3.01%; N 10.44%; O 23.86%

Use/Importance: Photosensitizer

>>Derivative: Monohydrate

Melting Point: Mp 238 dec.°

>>Derivative: Dichloride

CAS Registry Number: 84670-37-1

Molecular Formula: C₁₄H₆Cl₂N₂O₂

Molecular Weight: 305.119

Accurate Mass: 303.980632

Percentage Composition: C 55.11%; H 1.98%; Cl 23.24%; N 9.18%; O 10.49%

Physical Description: Yellow solid (toluene)

Melting Point: Mp 227-228 dec.°

>>Derivative: Diamide

CAS Registry Number: 145058-23-7

Molecular Formula: C₁₄H₁₀N₄O₂

Molecular Weight: 266.259

Accurate Mass: 266.080376

Percentage Composition: C 63.15%; H 3.79%; N 21.04%; O 12.02%

Physical Description: Light yellow solid

Melting Point: Mp 300°

>>Derivative: Dinitrile

Synonym(s): 2,9-Dicyano-1,10-phenanthroline

CAS Registry Number: 57709-63-4

Molecular Formula: C₁₄H₆N₄

Molecular Weight: 230.228

Accurate Mass: 230.059246

Percentage Composition: C 73.04%; H 2.63%; N 24.34%

Melting Point: Mp 300°

References:

Deady, L.W. *et al.*, *J. Het. Chem.*, 1981, **18**, 599, (*synth, ir, ms, pmr, C-13 nmr*)

Mäkelä, M. *et al.*, *Synth. Commun.*, 1992, **22**, 2811, (*diamide, dinitrile*)

Mullins, S.T. *et al.*, *J.C.S. Perkin 1*, 1996, 75, (*synth*)