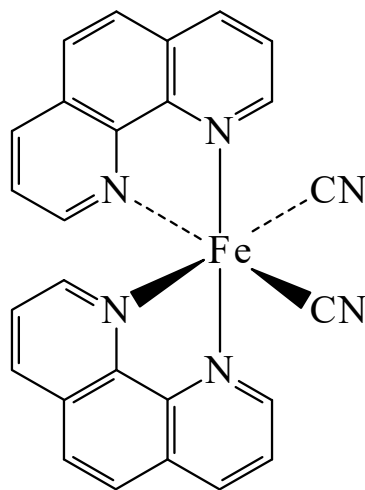




>>Entry Name: Bis(cyano-C)bis(1,10-phenanthroline- N^1, N^{10})iron(II), 11Cl

Synonym(s): Dicyanobis(1,10-phenanthroline)iron(II)



Related CAS Registry Numbers(s): 15362-08-0 30872-77-6 80875-80-5

Molecular Formula: $C_{26}H_{16}FeN_6$

Molecular Weight: 468.3

Accurate Mass: 468.078583

Percentage Composition: C 66.69%; H 3.44%; Fe 11.93%; N 17.95%

General Statement: *cis*-Octahedral; black and bronze forms are not *cis* and *trans* isomers

Use/Importance: Solvatochromic. Catalyst for oxidation

Physical Description: Diamagnetic. Bronze metallic solid by dehydration of corresp. dihydrate *in vacuo*, or black solid by Soxhlet extraction of dihydrate followed by vacuum drying

Solubility: Red soln. in MeOH, blue in CH_2Cl_2

Other Data: Protonation with HF gives *cis*- $[Fe(CNCH)_2(phen)_2]^{2(+)}$

>>Derivative: Dihydrate

CAS Registry Number: 23425-29-8

Source/Synthesis: Obt. by heating $[Fe(phen)_3]^{2(+)}$ with aq. KCN

Physical Description: Violet cryst.

References:

- Schilt, A.A., *J.A.C.S.*, 1957, **79**, 5421, (*synth*)
Schilt, A.A., *Inorg. Chem.*, 1964, **3**, 1323, (*ir*)
Dove, M.F.A. *et al.*, *J.C.S.(A)*, 1969, 1204, (*protonation, nmr*)
Inorg. Synth., 1970, **12**, 248, (*synth*)
Johannsson, L.Y. *et al.*, *Chem. Phys. Lett.*, 1974, **54**, 208, (*Mössbauer*)
Maddock, A.G., *J.C.S. Dalton*, 1986, 2349, (*nmr*)
Kotowski, M. *et al.*, *Inorg. Chim. Acta*, 1987, **131**, 225, (*solvatochromism*)