



Physical Description: Blue cubic cryst. (H₂O/diffusing into conc. HCl)
Solubility: Insol. H₂O

>>**Derivative:** Ni salt(*II*) (1:2)
Synonym(s): Nickel(*II*) ferrocyanide

CAS Registry Number: 14874-78-3
Molecular Formula: C₆FeN₆Ni₂
Molecular Weight: 329.333
Accurate Mass: 327.824075
Percentage Composition: C 21.88%; Fe 16.96%; N 25.52%; Ni 35.64%
Source/Synthesis: Synth. from Ni²⁽⁺⁾ + K₄Fe(CN)₆
Physical Description: Green or white solid
Solubility: Sol. NH₄OH, KCN
Other Data: Exists as hydrate

>>**Derivative:** Cu(*II*) salt (1:2)
Synonym(s): Cupric ferrocyanide. Hatchett's brown. C.I. Pigment Brown 9

CAS Registry Number: 13601-13-3
Molecular Formula: C₆Cu₂FeN₆
Molecular Weight: 339.045
Accurate Mass: 337.832579
Percentage Composition: C 21.26%; Cu 37.49%; Fe 16.47%; N 24.79%
Source/Synthesis: Synth. from CuCl₂ + K₄Fe(CN)₆
Use/Importance: Pigment
Physical Description: Reddish-brown powder
Solubility: Prac. insol. H₂O

>>**Derivative:** Zn(*II*) salt (1:2)
Synonym(s): Zinc ferrocyanide

CAS Registry Number: 14883-46-6
Molecular Formula: C₆FeN₆Zn₂
Molecular Weight: 342.733
Accurate Mass: 339.811673
Percentage Composition: C 21.03%; Fe 16.29%; N 24.52%; Zn 38.16%
Source/Synthesis: Synth. from Zn(NO₃)₂·6H₂O + Na₄Fe(CN)₆ in H₂O, or by electrochem. using Zn anode in [Fe(CN)₆]⁴⁽⁻⁾ solns.
Use/Importance: Ion exchange material for Cs, Fr e.g. in radionuclide-polluted H₂O
Other Data: Uncertainty about hydration

>>**Derivative:** Tetrakis(trimethylstannylum) compd. with 1,4-dioxan (1:1), dihydrate

CAS Registry Number: 126457-27-0
Molecular Formula: C₂₂H₄₈FeN₆O₄Sn₄
Molecular Weight: 991.346
Accurate Mass: 987.917443
Percentage Composition: C 26.65%; H 4.88%; Fe 5.63%; N 8.48%; O 6.46%; Sn 47.90%
Source/Synthesis: Synth. from K₄[Fe(CN)₆] + Me₃SnCl in 1,4-dioxan aq.
Use/Importance: Inorg. polymer
Physical Description: Colourless cryst. (aq. 1,4-dioxan)
Other Data: Dioxan and H₂O essential for networking polymeric struct. in which Fe units are linked via CN-Sn-NC and CN-Sn...dioxan...H₂O...dioxan-Sn-NC bridges

References: