



Sigma: P9387

>> **Derivative:** Di-K, Ni(II) salt

Synonym(s): Nickel(II) potassium ferrocyanide

CAS Registry Number: 13601-16-6

Molecular Formula: $C_6FeK_2N_6Ni$

Molecular Weight: 348.84

Accurate Mass: 347.816143

Percentage Composition: C 20.66%; Fe 16.01%; K 22.42%; N 24.09%; Ni 16.82%

Source/Synthesis: Synth. from $K_4Fe(CN)_6 \cdot 3H_2O + Ni(NO_3)_2 \cdot 6H_2O + KCl$ in H_2O

>> **Derivative:** K, Cr(III) salt

Synonym(s): Chromium(III) potassium ferrocyanide

Molecular Formula: $C_6CrFeKN_6$

Molecular Weight: 303.048

Accurate Mass: 302.857599

Percentage Composition: C 23.78%; Cr 17.16%; Fe 18.43%; K 12.90%; N 27.73%

Other Data: Polymeric with Cr-N $\equiv$ C-Fe linkages

>> **Derivative:** Tetra-NH₄ salt, hydrate

Synonym(s): Tetraammonium ferrocyanide hydrate. Ammonium hexacyanoferrate(II)

CAS Registry Number: 14481-29-9

Physical Description: Solid + H_2O

Other Data: Heating *in vacuo* to 320° gives a green solid of empirical formula $Fe(CN)_2$

Aldrich: 22599-1

Fluka: 9810

Sigma: A6555

>> **Derivative:** In salt (3:4)

Synonym(s): Indium ferrocyanide. Indium hexacyanoferrate(II)

CAS Registry Number: 15669-34-8

Molecular Formula: $C_{18}Fe_3In_4N_{18}$

Molecular Weight: 1095.14

Accurate Mass: 1095.475669

Percentage Composition: C 19.74%; Fe 15.30%; In 41.94%; N 23.02%

Source/Synthesis: Synth. from $K_3Fe(CN)_6$ in 0.5 M KCl with $InCl_3$; pH2, electrochem. synth

Use/Importance: Exhibits *p*-type semiconducting behaviour under visible light irradiation. Material has potential use in photoenergy conversion. Photo response improved in presence of redox electrolyte. Potential applications in ion-storage devices and solid state batteries

>> **Derivative:** Tetra-Tl salt

Synonym(s): Thallium ferrocyanide

Source/Synthesis: Synth. from $Tl_2SO_4 + H_4Fe(CN)_6$

Physical Description: Pale yellow cryst. (hot H_2O)

Other Data: Both Fe^{II} and Tl^I centres are octahedrally sited

>> **Derivative:** Fe(III) salt (3:4)

Synonym(s): Ferric ferrocyanide

CAS Registry Number: 14038-43-8

Molecular Formula: $C_{18}Fe_7N_{18}$

Molecular Weight: 859.248

Accurate Mass: 859.599905

Percentage Composition: C 25.16%; Fe 45.50%; N 29.34%

Aldrich: 23412-5