



>>Entry Name: Hexakis(cyano-C)ferrate(III)(3-)

Synonym(s): Hexacyanoferrate(III)(3-). Ferricyanide(3-)

CAS Registry Number: 13408-62-3

$[\text{Fe}(\text{CN})_6]^{3(-)} (O_h)$

Molecular Formula: $\text{C}_6\text{FeN}_6^{3(-)}$

Molecular Weight: 211.953

Accurate Mass: 211.953383

Percentage Composition: C 34.00%; Fe 26.35%; N 39.65%

Use/Importance: Oxidising agent; $[\text{Fe}(\text{CN})_6]^{3(-)}/[\text{Fe}(\text{CN})_6]^{4(-)} \text{E}^\circ + 0.36\text{V}$

Hazard & Toxicity: Toxic

>>Derivative: Tri-Li salt

Synonym(s): Lithium ferricyanide

CAS Registry Number: 13601-17-7

>>Derivative: Tri-Na salt

Synonym(s): Sodium ferricyanide

CAS Registry Number: 14217-21-1

Molecular Formula: $\text{C}_6\text{FeN}_6\text{Na}_3$

Molecular Weight: 280.922

Accurate Mass: 280.922684

Percentage Composition: C 25.65%; Fe 19.88%; N 29.92%; Na 24.55%

Physical Description: Ruby-red deliquescent cryst. + $1\text{H}_2\text{O}$

>>Derivative: Tri-K salt

Synonym(s): Potassium ferricyanide. Red prussate of potash

CAS Registry Number: 13746-66-2

Molecular Formula: $\text{C}_6\text{FeK}_3\text{N}_6$

Molecular Weight: 329.248

Accurate Mass: 328.844504

Percentage Composition: C 21.89%; Fe 16.96%; K 35.63%; N 25.52%

Source/Synthesis: Synth. by oxidation of $[\text{Fe}(\text{CN})_6]^{4(-)}$ using chlorine

Use/Importance: Commercially available. Mild oxidising agent; used in biosensors, analytical reagent

Physical Description: Red cryst., dimorphic

Other Data: Paramagnetic; $\mu_{\text{eff}} = 2.25\mu_{\text{B}}$ (300K); struct. phase transition at $\approx 130\text{K}$

Aldrich: 20801-9

Fluka: 60310

Sigma: P4066

>>Derivative: Fe(III) salt

Synonym(s): Iron(III) ferricyanide. Berlin green. Ferric ferricyanide

CAS Registry Number: 14433-93-3

Molecular Formula: $\text{C}_6\text{Fe}_2\text{N}_6$

Molecular Weight: 267.8

Accurate Mass: 267.888322

Percentage Composition: C 26.91%; Fe 41.71%; N 31.38%

Physical Description: Green cryst.

>>Derivative: Fe(II) salt (2:3)

Synonym(s): Ferrous ferricyanide. Turnbull's blue. Iron blue

Molecular Formula: $\text{C}_{12}\text{Fe}_5\text{N}_{12}$

Molecular Weight: 591.447

Accurate Mass: 591.711583

Percentage Composition: C 24.37%; Fe 47.21%; N 28.42%

Use/Importance: Pigment esp. for blueprints

Physical Description: Deep blue solid