



>>Entry Name: Tetrakis(cyano-C)platinate(2-), 9Cl

Synonym(s): Tetracyanoplatinate

CAS Registry Number: 15004-88-3

Related CAS Registry Numbers(s): 13755-32-3 16457-34-4 38245-27-1 59831-03-7 83018-11-5 87824-97-3

$[\text{Pt}(\text{CN})_4]^{2(-)}$

Molecular Formula: $\text{C}_4\text{N}_4\text{Pt}^{2(-)}$

Molecular Weight: 299.151

Accurate Mass: 298.977062

Percentage Composition: C 16.06%; N 18.73%; Pt 65.21%

structs. and physical properties of salts with Pt cations and partially oxidised materials

>>Derivative: Di-K salt

CAS Registry Number: 562-76-5

Molecular Formula: $\text{C}_4\text{K}_2\text{N}_4\text{Pt}$

Molecular Weight: 377.347

Accurate Mass: 376.904476

Percentage Composition: C 12.73%; K 20.72%; N 14.85%; Pt 51.70%

Other Data: Yellow product can form; which is possibly the monohydrate. Several hydrates known (vide infra)

Aldrich: 28155-7

Fluka: 60590

>>Derivative: Di-K salt, trihydrate

Synonym(s): Potassium tetracyanoplatinate(II) trihydrate

CAS Registry Number: 14323-36-5

Molecular Formula: $\text{C}_4\text{H}_6\text{K}_2\text{N}_4\text{O}_3\text{Pt}$

Molecular Weight: 431.393

Accurate Mass: 430.936171

Percentage Composition: C 11.14%; H 1.40%; K 18.13%; N 12.99%; O 11.13%; Pt 45.22%

Use/Importance: Commercially available

Physical Description: Yellow-green needles

Aldrich: 28156-5

>>Derivative: Di-Cs salt

CAS Registry Number: 15747-35-0

Molecular Formula: $\text{C}_4\text{Cs}_2\text{N}_4\text{Pt}$

Molecular Weight: 564.962

Accurate Mass: 564.78792

Percentage Composition: C 8.50%; Cs 47.05%; N 9.92%; Pt 34.53%

Physical Description: Blue-white cryst. + H_2O

Other Data: Several hydrates known

>>Derivative: Ba salt

CAS Registry Number: 562-81-2

Molecular Formula: $\text{C}_4\text{BaN}_4\text{Pt}$

Molecular Weight: 436.478

Accurate Mass: 436.882294

Percentage Composition: C 11.01%; Ba 31.46%; N 12.84%; Pt 44.69%

Use/Importance: Useful in synth. of partially oxidised $\text{Pt}(\text{CN})_4^{2(-)}$ salts. Has been used in fluorescent X-ray screens

Physical Description: Yellow-green or colourless cryst. + $4\text{H}_2\text{O}$

Hazard & Toxicity: Hazardous synth.

>>Variant: Tetracyanoplatinate(1.75-)

Synonym(s): Part. oxidised-form

$[\text{Pt}(\text{CN})_4]\text{Br}_{0.3} \cdot 3.2\text{H}_2\text{O}$, sometimes known as *Krogmann salts*