



>>Entry Name: **Platinate** $[\text{Pt}(\text{OH})_6]^{2(-)}$, 8Cl

Synonym(s): Hexahydroxyplatinate(*IV*)(2–)

CAS Registry Number: 19559-03-6

Related CAS Registry Numbers(s): 64363-44-6 72264-08-5 78713-87-8

$[\text{Pt}(\text{OH})_6]^{2(-)}$

Molecular Formula: $\text{H}_6\text{O}_6\text{Pt}^{2(-)}$

Molecular Weight: 297.124

Accurate Mass: 296.981206

Percentage Composition: H 2.04%; O 32.31%; Pt 65.66%

Use/Importance: Useful synthetic reagent. Has some use in plating solns. for Pt

>>Derivative: Di-Na salt

Synonym(s): Sodium platinate(*IV*)

CAS Registry Number: 12325-31-4

Molecular Formula: $\text{H}_6\text{Na}_2\text{O}_6\text{Pt}$

Molecular Weight: 343.103

Accurate Mass: 342.96074

Percentage Composition: H 1.76%; Na 13.40%; O 27.98%; Pt 56.86%

Physical Description: Red-brown or yellow cryst.

Solubility: Sol. H_2O

Other Data: Loses $3\text{H}_2\text{O}$ at 150-170°

>>Derivative: Ba salt

Synonym(s): Barium platinate(*IV*)

CAS Registry Number: 55964-57-3

Molecular Formula: $\text{BaH}_6\text{O}_6\text{Pt}$

Molecular Weight: 434.451

Accurate Mass: 434.886438

Percentage Composition: Ba 31.61%; H 1.39%; O 22.10%; Pt 44.90%

Use/Importance: Used to make BaPtO_3

Physical Description: Yellow powder

Solubility: Spar. sol. H_2O ; sol. acids

Other Data: Cryst. struct. shows it to be a monohydrate which easily partly dehydrates on warming, giving confusion on extent of hydration

>>Derivative: Di-H compd.

Synonym(s): Platinic acid

CAS Registry Number: 51850-20-5

Molecular Formula: $\text{H}_8\text{O}_6\text{Pt}$

Molecular Weight: 299.14

Accurate Mass: 298.996856

Percentage Composition: H 2.70%; O 32.09%; Pt 65.21%

Physical Description: Yellow solid

Solubility: Sol. H_2O , acids, dilute alkali

Aldrich: 33447-2

References:

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Ivanov-Emin, B.N. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1976, **21**, 1340, (*synth*)

Lipnitskii, I.V. *et al.*, *Koord. Khim.*, 1978, **4**, 1591, (*ir*, *Raman*)

Scott, H.G., *Acta Cryst. B*, 1979, **35**, 3014, (*synth*, *struct*)

Chamberland, B.L. *et al.*, *J. Less-Common Met.*, 1979, **65**, P41, (*synth*, *ir*, *thermal anal*)

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