



>>Entry Name: Hexaaquachromium(3+)

CAS Registry Number: 14873-01-9

$[\text{Cr}(\text{OH}_2)_6]^{3(+)}$

Molecular Formula: $\text{CrH}_{12}\text{O}_6^{3(+)}$

Molecular Weight: 160.087

Accurate Mass: 160.003899

Percentage Composition: Cr 32.48%; H 7.56%; O 59.97%

Use/Importance: Many studies of uv-vis spectrum, substitution reactions, deprotonation

Other Data: Many double salts known

>>Derivative: Triperchlorate

Synonym(s): Chromium(III) perchlorate hexahydrate

CAS Registry Number: 27535-70-2

Extra CAS Registry Numbers(s): 55147-94-9

Source/Synthesis: Synth. from $\text{CrO}_3 + \text{H}_2\text{O}_2 + \text{HClO}_4$

Physical Description: Cryst. (H_2O)

UV: [neutral] λ_{max} 410 (); 560 () (no solvent reported)

Other Data: Often formed containing polynuclear hydroxy-containing cations

Hazard & Toxicity: Potentially explosive

>>Derivative: Sulfate (2:3)

>>Derivative: Potassium sulfate double salt (1:1:2)

References:

Moore, P. *et al.*, *Inorg. Chem.*, 1965, **4**, 1671, (*synth, perchlorate*)

Spiccia, L. *et al.*, *Inorg. Chem.*, 1988, **27**, 2660-2666, (*reactions*)

Soptrajanov, B. *et al.*, *J. Mol. Struct.*, 1993, **293**, 101-104, (*double salts*)

De, P. *et al.*, *Transition Met. Chem. (London)*, 1993, **18**, 353-355, (*reactions*)