



>>Entry Name: Chromium(III) sulfate ($\text{Cr}_2(\text{SO}_4)_3$)

Synonym(s): Chromic sulfate. Chromium sulfate

CAS Registry Number: 10101-53-8

Related CAS Registry Numbers(s): 13520-66-6 15804-55-4 16243-91-7

Extra CAS Registry Numbers(s): 14489-25-9

$\text{Cr}_2(\text{SO}_4)_3$

Molecular Formula: $\text{Cr}_2\text{O}_{12}\text{S}_3$

Molecular Weight: 392.183

Accurate Mass: 391.736208

Percentage Composition: Cr 26.52%; O 48.95%; S 24.53%

Source/Synthesis: Prepd. from $\text{Cr}(\text{OH})_3 + \text{H}_2\text{SO}_4$

Use/Importance: Used in chrome plating, as a mordant in the textile industry, and in green paints and varnishes, etc.

Physical Description: Red powder (anhyd.); red/brown cryst. (hexahydrate); violet cryst. (octadecahydrate). Lower hydrates are green

Solubility: Sol. H_2O

>>Derivative: Hydrate

CAS Registry Number: 15244-38-9

Use/Importance: Commercially available

Other Data: Variable H_2O content

Aldrich: 34243-2

References:

Krauss, F. *et al.*, *Z. Anorg. Allg. Chem.*, 1929, **179**, 413, (*synth*)

Mellor *Compr. Treat. Inorg. Theor. Chem.*, 1931, **11**, 434, (*rev*)

Inorg. Synth., 1946, **2**, 197, (*synth, anhyd*)

Kokkoros, P.A. *et al.*, *Mineral. Petrogr. Mitt.*, 1965, **10**, 45; *CA*, **64**, 10494c, (*cryst struct, anhyd*)