



>>Entry Name: Chromium(III) nitrate

Synonym(s): Chromic nitrate

CAS Registry Number: 13548-38-4

Extra CAS Registry Numbers(s): 10103-47-6

$\text{Cr}(\text{NO}_3)_3$

Molecular Formula: CrN_3O_9

Molecular Weight: 238.011

Accurate Mass: 237.903966

Percentage Composition: Cr 21.85%; N 17.65%; O 60.50%

Source/Synthesis: Synth. from N_2O_5 + $\text{Cr}(\text{CO})_6$

Physical Description: Very deliquescent, pale green powder. Non-volatile

Solubility: Sol. H_2O , EtOAc, MeCN, DMSO; insol. C_6H_6 , CCl_4 , CHCl_3

Other Data: Dec. on heating to 60°

Fluka: 27067

>>Derivative: Nonahydrate

CAS Registry Number: 7789-02-8

Source/Synthesis: Prepd. from $\text{Cr}(\text{OH})_3$ or CrO_3 + dil. HNO_3

Physical Description: Deep-violet cryst.

Melting Point: Mp 60°

Solubility: Sol. H_2O , EtOH

Aldrich: 23925-9

Fluka: 27080

Sigma: C2021

References:

Mellor Compr. Treat. Inorg. Theor. Chem., 1931, **11**, 473, (rev)

Addison, C.C. *et al.*, J.C.S., 1964, 539, (synth, anhydrous)

Kannan, K.N. *et al.*, Acta Cryst., 1965, **19**, 151, (cryst struct, hydrate)

Lewis, R.J., Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold, 1992, CMJ600