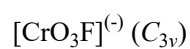




>>Entry Name: **Fluorotrioxochromate(VI)(1-)**, 11Cl, 10Cl, 9Cl
Synonym(s): Trioxofluorochromate(VI)(1-). Fluorochromate(1-)

CAS Registry Number: 17185-83-0

Related CAS Registry Numbers(s): 83042-08-4



Molecular Formula: $\text{CrFO}_3^{(-)}$

Molecular Weight: 118.993

Accurate Mass: 118.923657

Percentage Composition: Cr 43.70%; F 15.97%; O 40.34%

General Statement: For chloro analogue see Chlorotrioxochromate(VI)(1-) [HXL83-F](#). Bromo and iodo analogues dec.

Use/Importance: Oxidising agent

Other Data: Readily hydrol. Many salts known

>>Derivative: K salt

CAS Registry Number: 33637-02-4

Molecular Formula: CrFKO_3

Molecular Weight: 158.091

Accurate Mass: 157.887364

Percentage Composition: Cr 32.89%; F 12.02%; K 24.73%; O 30.36%

Physical Description: Red cryst.

Solubility: Sol. H_2O , etches glass vessels

Other Data: Rb and Cs salts similar

>>Derivative: NH_4 salt

CAS Registry Number: 58501-09-0

Physical Description: Red cryst.

>>Derivative: Pyridinium salt

Synonym(s): Pyridinium fluorochromate

CAS Registry Number: 83042-08-4

Use/Importance: Selective oxidising agent used in org. synth.

Physical Description: Orange cryst.

Melting Point: Mp 106-108°

>>Derivative: Isoquinolinium salt

CAS Registry Number: 143440-93-1

Source/Synthesis: Synth. from isoquinoline, aq. HF and CrO_3

Use/Importance: Oxidises primary and secondary alcohols to aldehydes and ketones; oxidises anthracene and phenanthrene to the corresp. quinones

Physical Description: Bright orange cryst. (hot H_2O)

Melting Point: Mp 171-172°

Solubility: Sol. H_2O , DMF, DMSO, Me_2CO ; less sol. CH_2Cl_2 ; spar. sol. C_6H_6 , CCl_4 , CHCl_3 , hexane

References:

- Colton, R. *et al.*, *Halides of the First Row Transition Metals*, Wiley-Interscience, 1969, **1**, (rev, bibl)
Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1526, (synth)
Granier, W. *et al.*, *J. Fluorine Chem.*, 1981, **19**, 123, (cryst struct)
Bhattacharjee, M.N. *et al.*, *Bull. Chem. Soc. Jpn.*, 1984, **57**, 258, (use)
Nonaka, T. *et al.*, *Bull. Chem. Soc. Jpn.*, 1984, **57**, 2019, (use)
Woolf, A.A., *J. Fluorine Chem.*, 1985, **27**, 285
Fieser and Fieser's *Reagents for Organic Synthesis*, Wiley, 1986, **12**, 419, (use)
Bhattacharjee, M.N. *et al.*, *Tetrahedron*, 1987, **43**, 5389, (use)
Srinivasan, R. *et al.*, *Synth. Commun.*, 1997, **27**, 2057-2064, (isoquinolinium salt, synth, ir, use)