



>>Entry Name: Tetrafluoroboric acid

Synonym(s): Fluoroboric acid. Hydrofluoroboric acid. Hydrogen tetrafluoroborate, 11Cl, 10Cl, 9Cl, 8Cl

CAS Registry Number: 16872-11-0

H[BF₄]

Molecular Formula: BF₄H

Molecular Weight: 87.812

Accurate Mass: 88.010742

Source/Synthesis: Commercially available as 48% aq. HBF₄ soln.

Use/Importance: Reagent for fluoroborate salt prep. Used in metal finishing and electrochemistry. Efficient catalyst for carbohydrate protection and deprotection reactions

Solubility: Sol. H₂O

pKa Value: pK_a -4.9

Other Data: Aq. solns. hydrol. to B-OH containing species

Hazard & Toxicity: Reacts with glass

Aldrich: 40006-8

Fluka: 15590

References:

Bonadeo, H. *et al.*, *J. Mol. Spectrosc.*, 1969, **32**, 214, (*ir*)

Mesmer, R.E. *et al.*, *Inorg. Chem.*, 1973, **12**, 699, (*F-19 nmr*)

Akitt, J.W., *J.C.S. Faraday I*, 1975, **71**, 1557, (*F-19 nmr, B-11 nmr*)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **10**, 693, (*manuf, uses*)

Gmelin Handbook Inorg. Chem., Syst. No. 13, Suppl. Vol., 1982, **2**; 1988, **3**, 693, (*rev, bibl*)

Albert, R. *et al.*, *Carbohydr. Res.*, 1985, **137**, 282, (*use*)