



>>Entry Name: Lithium hexafluoroarsenate(V)

Synonym(s): Hexafluoroarsenate(1-) lithium salt, 8Cl

CAS Registry Number: 29935-35-1

LiAsF₆

Molecular Formula: AsF₆Li

Molecular Weight: 195.853

Accurate Mass: 195.928015

Percentage Composition: As 38.25%; F 58.20%; Li 3.54%

Source/Synthesis: Commercially available. High purity LiAsF₆ is prepd. by a metathetical reaction between KAsF₆ and LiClO₄ in an inert org. solv. such as HCOOMe. Alternative preparation involves reaction of aq. HAsF₆ with aq. LiOH

Use/Importance: Electrolyte component for lithium battery systems. Many studies of phys. props. in gel media. Used as supporting electrolyte in non-aq. solvs.

Physical Description: Rhombohedral white cryst. or white needles (SO₂ liq.)

Hazard & Toxicity: Highly toxic cancer suspect agent

Aldrich: 30831-5

Fluka: 62499

References:

- Kemmitt, R.D.W. *et al.*, *J.C.S.*, 1963, 4408, (*cryst struct*)
U.S. Pat., 1974, 3 848 063; *CA*, 1975, **82**, 45944, (*synth*)
U.S. Pat., 1975, 3 907 977; *CA*, 1976, **84**, 7178, (*synth*)
U.S. Pat., 1977, 4 065 550; *CA*, 1978, **88**, 76049, (*synth*)
Guo, Q.Z. *et al.*, *J. Magn. Reson.*, 1984, **57**, 143, (*F-19 nmr*)
Salomon, M., *Electrochim. Acta*, 1985, **30**, CO21-CO26, (*electrochem*)
Pham, M.C. *et al.*, *J. Appl. Electrochem.*, 1991, **21**, Q02-Q09, (*use*)
Croce, F. *et al.*, *Chem. Mater.*, 1993, **5**, 1268-1272, (*Li-7 nmr, gels*)
Lon, S. *et al.*, *Acta Cryst. C*, 1998, **54**, 567-569