



>>Entry Name: Lithium iodate(V)

Synonym(s): Iodic(V) acid, lithium salt, 8Cl

CAS Registry Number: 13765-03-2

LiIO₃

Molecular Formula: LiIO₃

Molecular Weight: 181.844

Accurate Mass: 181.905221

Percentage Composition: I 69.79%; Li 3.82%; O 26.40%

Source/Synthesis: Synth. from aq. Ba(IO₃)₂ and aq. Li₂SO₄

Use/Importance: Single cryst. are used as pulsed LiIO₃ doubly resonant parametric oscillators

Physical Description: Hygroscopic white hexagonal cryst. Piezoelectric

Solubility: V. sol. H₂O (80g per 100 cm³ at 18°); insol. EtOH

Other Data: ΔH_f° -503 kJ mol⁻¹

Aldrich: 44396-4

References:

Gmelin Handbook Inorg. Chem., Syst. No. 20, 1960, 469, (rev, bibl)

de Boer, J.L. *et al.*, *Acta Cryst.*, 1966, **21**, 841, (cryst struct)

Campillo, A.J., *IEEE J. Quantum Electron.*, 1972, **8**, 809

Baisa, D.F., *Ukr. Khim. Zh. (Russ. edn.)*, 1973, **18**, 588; *CA*, **79**, 47558, (Li-7 nmr)

Segel, S.L. *et al.*, *J. Chem. Phys.*, 1980, **72**, 1406, (I-127 nmr)