



>>Entry Name: Lithium formate

Synonym(s): Lithium methanoate. Formic acid, lithium salt, 8Cl. Methanoic acid, lithium salt

CAS Registry Number: 556-63-8

LiOOCH

Molecular Formula: CHLiO₂

Molecular Weight: 51.959

Accurate Mass: 52.013658

Percentage Composition: C 23.12%; H 1.94%; Li 13.36%; O 61.59%

Source/Synthesis: Prepared by neutralisation of Li₂CO₃ by formic acid; cryst. as monohydrate

Other Data: Dec. at 230°

>>Derivative: Monohydrate

CAS Registry Number: 6108-23-2

Molecular Formula: CH₃LiO₃

Molecular Weight: 69.974

Accurate Mass: 70.024223

Percentage Composition: C 17.16%; H 4.32%; Li 9.92%; O 68.59%

Use/Importance: Piezoelectric

Physical Description: White orthorhombic cryst. dec. on heating by H₂O loss (–H₂O at 94°)

Solubility: V. sol. H₂O (28g per 100 cm³ at 18°; 57g per 100 cm³ at 98°); spar sol. EtOH, Me₂CO; insol. C₆H₆

Aldrich: 44269-0

References:

Nitta, A., *Sci. Pap. Inst. Phys. Chem. Res. (Jpn.)*, 1928, **9**, 151, (*monohydrate, cryst struct*)

Duval, C. *et al.*, *Ann. Phys. (Leipzig)*, 1942, **17**, 5, (*ir, monohydrate*)

Gmelin Handbook Inorg. Chem., Syst. No. 20, 1960, 505, (*rev, bibl, monohydrate*)

Harvey, K.B. *et al.*, *Can. J. Chem.*, 1963, **41**, 1181, (*ir*)

Donaldson, J.D. *et al.*, *Spectrochim. Acta*, 1964, **20**, 847, (*ir, struct*)

Grigor'ev, A.I., *Dokl. Akad. Nauk SSSR, Ser. Khim.*, 1966, **171**, 136, (*ir*)

Muthukrishnan, K. *et al.*, *CA*, 1973, **78**, 152555, (*pmr, monohydrate*)

Harkema, S. *et al.*, *Acta Cryst. B*, 1977, **33**, 3971, (*cryst struct*)

Yuzvak, V. *et al.*, *Kristallografiya*, 1977, **22**, 106, (*Li-7 nmr*)

Agarwal, A. *et al.*, *Can. J. Chem.*, 1983, **61**, 2282, (*ir, Raman, monohydrate*)