



>>Entry Name: Barium acetate

Synonym(s): Acetic acid, barium salt, 8Cl. Ethanoic acid, barium salt

CAS Registry Number: 543-80-6

Ba(OAc)₂

Molecular Formula: C₄H₆BaO₄

Molecular Weight: 255.416

Accurate Mass: 255.931842

Percentage Composition: C 18.81%; H 2.37%; Ba 53.77%; O 25.06%

Source/Synthesis: Synth. by addition of aq. AcOH (50%) to an aq. soln. of Ba(OH)₂ previously neutralised with AcOH

Use/Importance: Commercially available. Catalyst for alkene polym.

Physical Description: Colourless cryst. Dec. on heating with BaCO₃ formation

Solubility: V. sol. H₂O (59 g per 100 cm³ at 0°; 75 g per 100 cm³ at 100°)

Hazard & Toxicity: Toxic

Aldrich: 25591-2

Fluka: 11725

Sigma: B0896

>>Derivative: Monohydrate

CAS Registry Number: 5908-64-5

Molecular Formula: C₄H₈BaO₅

Molecular Weight: 273.431

Accurate Mass: 273.942407

Percentage Composition: C 17.57%; H 2.95%; Ba 50.22%; O 29.26%

Physical Description: Colourless triclinic cryst.; dec. on heating with H₂O loss (–H₂O at 150°)

Solubility: V. sol. H₂O (76 g per 100 cm³ at 26°)

Other Data: Dehydration by (MeO)₂CMe₂ in MeOH gives anhyd. Ba(OAc)₂

Hazard & Toxicity: Toxic

References:

- Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **2**, 1277A, (ir)
Padmanabhan, V.M., *Proc. - Indian Acad. Sci., Sect. A*, 1953, **37**, 401; *CA*, **47**, 8515a, (Raman, monohydrate)
Herrera, J. *et al.*, *Circ. Farm.*, 1981, **39**, 153; *CA*, 1982, **96**, 27722, (dehydration, monohydrate)
Baraldi, P., *Spectrochim. Acta A*, 1982, **38**, 51, (thermal dec, ir)
Jagannathan, M.R. *et al.*, *Indian J. Pure Appl. Phys.*, 1984, **22**, 484, (pmr)
Groombridge, C.J. *et al.*, *J. Solid State Chem.*, 1985, **59**, 306, (cmr, monohydrate)
Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 332C, (haz)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, BAH500