



>>Entry Name: Silver(I) acetate (AgOAc)

CAS Registry Number: 563-63-3

AgOAc

Molecular Formula: $C_2H_3AgO_2$

Molecular Weight: 166.913

Accurate Mass: 165.918397

Percentage Composition: C 14.39%; H 1.81%; Ag 64.63%; O 19.17%

Aldrich: 21667-4

Fluka: 85140

Sigma: S1633

>>Derivative: Dimer

Synonym(s): Bis[μ -(acetato-*O:O'*)]disilver

CAS Registry Number: 55906-24-6

Molecular Formula: $C_4H_6Ag_2O_4$

Molecular Weight: 333.825

Accurate Mass: 331.836794

Percentage Composition: C 14.39%; H 1.81%; Ag 64.63%; O 19.17%

Use/Importance: Oxidising agent for use in liq. ammonia; with $PdCl_2$, catalyses allylic oxidn. of alkenes; reagent for hydroxylation of alkenes, ring-opening/subst. of dihalocyclopropanes and for subst. of halides by acetate

Physical Description: Light-sensitive white to greyish lustrous needles or crystalline powder

Solubility: Spar. sol. cold H_2O ; sol. dil. HNO_3

Other Data: $\Delta H_f^\circ -392.3 \text{ kJ mol}^{-1}$

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1234A, (ir)

Winstein, S. *et al.*, *J.A.C.S.*, 1942, **64**, 2787, (use, subst of halides)

Matthews, F.W. *et al.*, *Anal. Chem.*, 1950, **22**, 514, (powder struct)

Bonner, W.A. *et al.*, *J. Chem. Educ.*, 1962, **39**, 639, (ir)

Yakerson, V.I. *et al.*, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1963, 1003; *CA*, **59**, 123956, (thermodyn)

Bunton, C.A. *et al.*, *J.C.S.*, 1963, 770, (use, hydroxylation)

Pascual, C. *et al.*, *Helv. Chim. Acta*, 1966, **49**, 1344, (ir)

Kline, R.J. *et al.*, *Inorg. Chem.*, 1966, **5**, 932, (synth, use)

Sandler, S.R., *J.O.C.*, 1967, **32**, 3876, (use, ring-opening of cyclopropanes)

Adams, S.K. *et al.*, *Inorg. Chim. Acta*, 1975, **12**, 163, (ms, ir)

Uemura, S. *et al.*, *Tet. Lett.*, 1982, **23**, 87, (use, allylic oxidn)

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