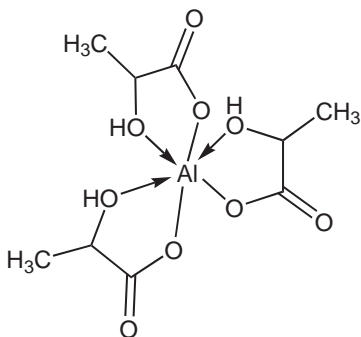


**348. Aluminum Lactate.** [18917-91-4] Tris[2-(hydroxy- $\kappa O$ )propanoato- $\kappa O$ ]aluminum;  $\text{Al}(\text{lact})_3$ .  $\text{C}_9\text{H}_{15}\text{AlO}_9$ ; mol wt 294.19. C 36.74%, H 5.14%, Al 9.17%, O 48.95%. Prepn from lactic acid and aluminum isopropoxide or aluminum chloride: A. K. Rai *et al.*, *J. Prakt. Chem.* **20**, 105 (1963); from lactic acid and aluminum foil: R. W. Jones, J. E. Cluskey, *Cereal Chem.* **40**, 589 (1963). Partition coefficients: A. Tapparo, M. Perazzolo, *Int. J. Environ. Anal. Chem.* **36**, 13 (1989). Molecular structure: G. G. Bombi *et al.*, *Inorg. Chim. Acta* **171**, 79 (1990). Stability and NMR spectra: B. Corain *et al.*, *J. Chem. Soc. Dalton Trans.* **1992**, 169. Optical rotation isotherms: I. G. Bratu *et al.*, *COFrRoCA 2002, Actes Colloq. Fr.-Roum. Chim Appl.* **2**, 157 (2002). Reactant in sol-gel synthesis of aluminophosphate glass: L. Zhang *et al.*, *Chem. Mater.* **15**, 2702 (2003). Inhibition of the biological effects of silica quartz: R. Bégin *et al.*, *Exp. Lung Res.* **10**, 385 (1986); R. Duffin *et al.*, *Toxicol. Appl. Pharmacol.* **176**, 10 (2001). Clinical evaluation as antiseptic throat spray: W. Klingbeil, *Fortschr. Med.* **100**, 146 (1982); in dental hypersensitivity: Y. Higuchi *et al.*, *J. Clin. Dent.* **7**, 9 (1996).



White powder.  $[\alpha]_{366}^{20} +48.31^\circ$ ;  $[\alpha]_{436}^{20} +33.37^\circ$ ;  $[\alpha]_{578}^{20} +10.20^\circ$  ( $c = 0.1 \text{ M}$ ).  $[\alpha]_{366}^{25} +48.40^\circ$ ;  $[\alpha]_{436}^{25} +31.36^\circ$ ;  $[\alpha]_{578}^{25} +10.22^\circ$  ( $c = 0.1 \text{ M}$ ). Partition coefficient ( $n$ -octanol/water): 0.0037-0.0127. Soly in water ( $25^\circ$ ):  $0.70 \pm 0.01 \text{ mol dm}^{-3}$ . pH of saturated soln: 2.9.

USE: As a reagent in biological activity studies of aluminum; in sol-gel processing.

THERAP CAT: Antiseptic.