(0.4 g. at.) of sodium in 250 ml. of dry xylene. Stirring was continued for 48 hours at reflux temperature after the addition of 68 was complete. The reaction mixture was then cooled in an ice bath, and 27 g. (0.45 mole) of glacial acetic acid was added dropwise to decompose excess sodium. The neutral xylene solution obtained from workup as before was distilled at reduced pressure (30 mm.). The infrared spectrum of the distillation residue was essentially identical to that of the starting trans-diethyl ester 68. No other neutral products were isolated at that time.

III. Acyloin reaction of dimethyl trans-1,3-cyclopentanedicarboxylate (70)

Experimental procedure and GLC analysis.—The cyclization procedure of Prelog and co-workers was followed, using the apparatus described for the acyloin condensation I of the cis-diethyl ester 69. A 1-l. reaction flask was used. The trans-dimethyl ester 70 (50.0 g., 0.21 mole) in 100 ml. of xylene was added to a dispersion of 19.6 g. (0.85 g. at.) of sodium metal in 500 ml. of dry xylene over a period of 50 hours. After addition the flask was immediately cooled in an ice bath, and 40 ml. of methanol was added dropwise to decompose the excess sodium. The mixture was poured into 500 ml. of ice water and acidified