The Acyloin Reaction of Dimethyl trans-1,3-Cyclopentanedi propionate

Preliminary examination of models of cis- (73) and trans-bicyclo[6.2.1]undecan-4-ol-5-one (72) indicated that the latter compound would be more difficult to cyclize. However, since the trans-dipropionic acid 53 is more accessible synthetically and since it was anticipated that some starting material would be lost in developing technique initially, it was decided to use the trans esters 68 and 70 in preliminary cyclization studies.

Several reactions were run on diethyl trans- (68) and dimethyl trans-1,3-cyclopentanedi propionate (70) using the apparatus and procedure described by Prelog and co-workers 34.