

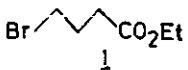
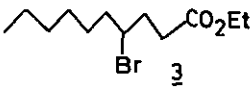
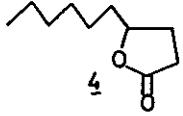
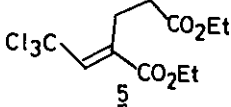
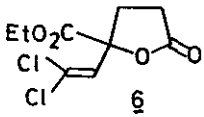
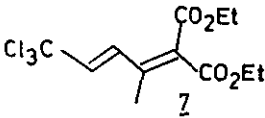
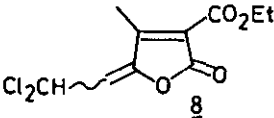
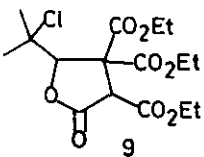
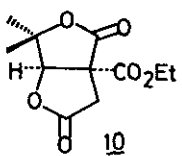
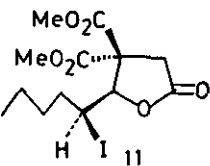
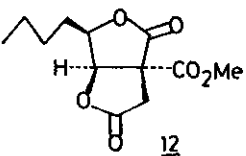
SILICA GEL-PROMOTED γ -LACTONIZATION OF γ -HALO ESTERS

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We recently found that silica gel promotes γ -lactonization of γ -halo esters. The mixture of γ -halo esters and silica gel (2-6 equiv.) was heated at reflux temperature of xylene, and the results were summarized in Table 1. This γ -lactonization was applied to the synthesis of (+)-canadensolide, which included highly stereoselective alkylation of n-hexylidenemalonate and the following regio- and stereo-specific iodolactonization. The synthesis of optically active canadensolide was also attempted.

Table 1.

Halo Esters	γ -Lactones	Yield (%)
		66
		79
		63
		46
		70
		78

