NOTES

BULLETIN OF THE CHEMICAL SOCIETY OF JAPAN, VOL. 47(6), 1530 (1974)

Synthesis of Sesquirosefuran

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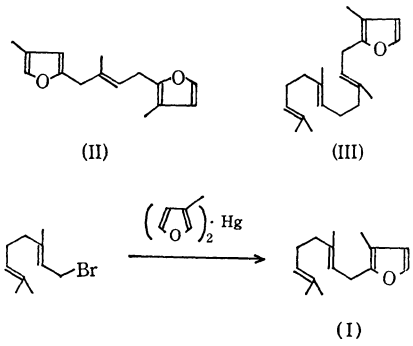
(Received March 2, 1974)

Synopsis. Sesquirosefuran (I) was synthesized by the coupling of geranyl bromide with 2,2′-bis(3-methylfuryl)-mercury in 29% yield.

Quite recently, Chakravarti *et al.* reported the synthesis[1] of sesquirosefuran (I), one of the components isolated from *Actinodaphne longifolia* Nakai by two of us[2] who also established the structure of other component, longifolin (II). The Chakravarti's paper prompted us to report our own result. Although identity of both natural and synthetic sesquirosefuran (I) was ascertained,[3] the result of the synthesis was kept unpublished since our effort was then directed toward the synthesis of longifolin (II) by the similar method.

As in the case of 2-farnesyl-3-methylfuran (III),[4] coupling of geranyl bromide with 3-methylfurano moiety was achieved using 2,2′-bis(3-methylfuryl)mercury[5] in the presence of zinc-copper powder as described below. Although Chakravarti *et al.* carried out the coupling using 3-methyl-2-furyllithium in 40% yield, our trials with the same reagent gave no satisfactory results.

To an ice cooled anhydrous benzene solution (6 ml) of 2,2′-bis(3-methylfuryl)mercury (1.45 g, 4 mmol) was added 0.87 g (4 mmol) of geranyl bromide in 2 ml of anhydrous benzene. After an addition of zinc-copper powder (15 mg) to the mixture, the reaction mixture was stirred at room temperature for 15 hr, and poured into ice–water. Extraction with ether and a usual work up afforded crude product which was purified by passing through silica gel column with mixed solvents of *n*-hexane: cyclohexane (1 : 1) to give 243 mg (29%) of oily sesquirosefuran (I). IR, NMR, mass fragmentations and analysis were in accord with those of natural product.



Reaction scheme

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References

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3) Thesis of Bachelor of Science of Mr. K. Nishihara at Tohoku University, Feb., 1973.

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