

Studies on the Coumarin Derivatives. VI. Syntheses of Methyl Derivatives of Dihydrocoumarin and their Anthelmintic Action.

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Summary

1) Dihydrocoumarin and its derivatives possessing the methyl group at 3, 4, 5, 6, 7, 8, and at 4, 7 and 3, 4, 7 were prepared of which only 4, 7-dimethyldihydrocoumarin has been described in literature. *In vitro* action of these compounds against *Ascaris suilla* was tested.

2) Biological tests were made by observing the activity of the ascaris in a glass tube filled with modified Locke's solution containing the dihydrocoumarin derivatives in a 2,000 dilution, at 38°.

3) Time elapsed until complete ceasure of motion in ascaris was taken as the standard by which the effect decreased in the following order : 7-methyl > 8-methyl ~ dihydrocoumarin > 3, 4, 7-trimethyl > 3-methyl ~ 6-methyl ~ 4, 7-dimethyl > 5-methyl ~ 4-methyldihydrocoumarin.

4) This order of efficacy is not parallel with the order of the efficacy of coumarin and its methyl derivatives.

5) Reduction of the double bond between 3- and 4-position in coumarin and its methyl derivatives to dihydrocoumarin and its methyl derivatives results in the decrease of efficacy.

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