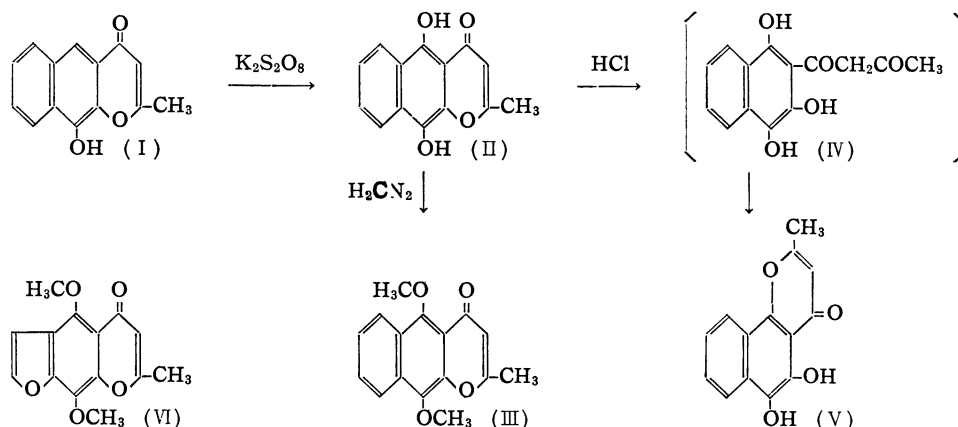


### Synthesis of 2-Methyl-5,8-dimethoxy-6,7-benzochromone

Synthesis of 2-methyl-5,8-dimethoxy-6,7-benzochromone (III), in which the furan ring of khellin (VI) was replaced by a benzenoid ring, was attempted in several ways<sup>1,2)</sup> but has not been successful.



The authors tried hydroxylation of 2-methyl-8-hydroxy-6,7-benzochromone (I)<sup>1)</sup> by means of potassium persulfate, and could obtain 2-methyl-5,8-dihydroxy-6,7-benzochromone (II), m.p.  $250^\circ$  (decomp.) (red prisms, *Anal.* Calcd. for  $C_{14}H_{10}O_4$ : C, 69.42; H, 4.16. Found: C, 69.24; H, 4.21), though in poor yield (ca. 10%).

The product (II) could be converted to the dimethyl ether, 2-methyl-5,8-dimethoxy-6,7-benzochromone (III), m.p.  $146^\circ$ , by ethereal solution of diazomethane in the presence of methanol (colorless needles, *Anal.* Calcd. for  $C_{16}H_{14}O_4$ : C, 71.10; H, 5.22. Found: C, 70.89; H, 5.16).

Heating the product (II) with hydrochloric acid on water bath gave yellow needles (V), m.p.  $224^\circ$ , which was proved to be 2-methyl-5,6-dihydroxy-7,8-benzochromone reported previously.<sup>2)</sup> Probably such a rearrangement might proceed through cleavage of  $\gamma$ -pyron ring to the intermediate 1,3,4-trihydroxy-2-acetyl-naphthalene (IV), followed by cyclization of the diketone to the new chromone (V).

This fact demonstrated that the hydroxyl group was introduced undoubtedly in 5-position of benzochromone.

The further details will be reported later.

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April 5, 1962.

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