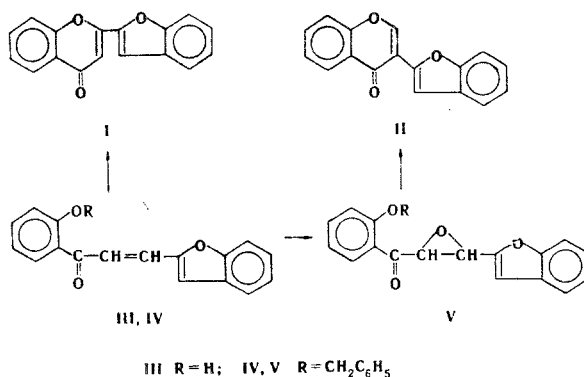


SYNTHESIS OF BENZOFURAN ANALOGS OF FLAVONES
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We have found that the reaction of chalcone III with selenium dioxide in amyl alcohol gives 2-(2-benzofuryl)chromone (I). However, if the hydroxyl group is benzylated and the resulting chalcone (IV) is oxidized to epoxychalcone V, the latter undergoes intramolecular isomerization under the influence of boron trifluoride etherate with subsequent cyclization to 3-(2-benzofuryl)chromone (II), during which the O-benzyl group is lost.



Chalcones III and IV were obtained by alkaline condensation of 2-formylbenzofuran with o-hydroxy- and o-benzyloxyacetophenones. The individuality of the compounds was verified by thin-layer chromatography on Silufol in benzene-ethanol (95:5). The results of elementary analysis were in agreement with the calculated values (see Table 1).

TABLE 1. Benzofurylchalcones and Benzofurylchromones

Compound	mp, °C (solvent)	IR spectrum, cm ⁻¹ , in KBr pellets		UV spectrum, λ _{max} nm (in alc.)	R _f	Yield, %
		ν _{C=O}	ν _{C=C}			
I	137-138 heptane	1640	1615, 1585	244, 336	0.18	50
II	213-214 heptane	1660	1620, 1590	278, 313	0.47	65
III	123-124 alcohol	1642	1575	380	0.66	85
IV	83 alcohol	1662	1605	356	0.40	92
V	97.5 alcohol	1695	1600	246	0.31	71

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