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RING ISOMERIZATION OF FLAVONES.

NEW SYNTHESIS OF OROXYLIN-A AND 7-METHYL-OROXYLIN-A

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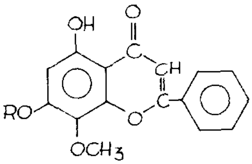
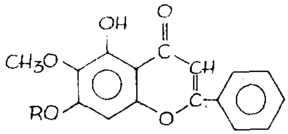
In a preliminary communication [1] we already have described a new method of ring isomerization by which both polyhydroxy-*iso*flavones and their O-methyl or O-benzyl derivatives may directly be isomerized.



I.

a: R=H
b: $R=CH_2-C_6H_5$
c: $R=CH_3$



II.

We now report on the extension of this method to the group of the flavones. At present our method is unique with respect to its suitability for effecting direct ring isomerization of flavones in alkaline media.

As starting materials 7-benzyl-wogonin /Ib/ [2] and 7-methyl-wogonin /Ic/ have been synthesised by partial benzylation and methylation, respectively, of wogonin [3,4].

Isomerization has been effected by refluxing with benzyl alcohol under anhydrous conditions in the presence of potassium carbonate. After treatment with dilute sulfuric acid and steam destillation 7-benzyl-oroxylin-A /IIb, mp.: 165-166 C^{o}, lit. [5]:164-166^{o}/ and 7-methyl-oroxylin-A /IIc, mp.: 160-162 C^{o}, lit. [6]: 155-156^{o}/, respectively, have been isolated from the reaction mixture, the yield being in both cases almost quantitative. Conversion of 7-methyl-wogonin to 7-methyl-oroxylin-A already has been brought about [7], however only by a multistep process. Catalytic debenzylation of the former gave oroxilin-A /IIa, mp.: 220-221 C^{o}, lit. [5]: 218-220 C^{o}/.

Experimental details of this work shall shortly be published in Acta Chim. Acad. Sci. Hung.

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