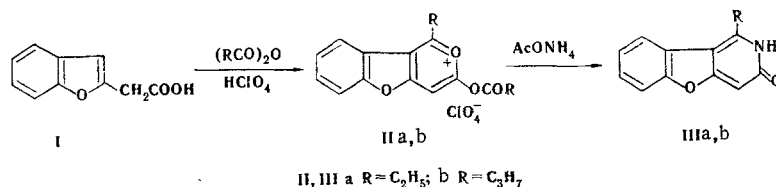


SYNTHESIS OF ACYLOXYBENZOFURO[3,2-c]PYRYLIUM SALTS

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We recently observed that a pyrylium ring is formed and the resulting hydroxyl group is acylated in the acylation of 2-benzofurylacetic acid (I) with aliphatic acid anhydrides in the presence of 70% perchloric acid:



Thus the previously unknown 9-acyloxybenzofuro[3,2-c]pyrylium salts (II) were obtained in this way. For example, perchlorate IIa is formed in 97% yield as yellow crystals with mp 81° (dec., from glacial acetic acid). IR spectrum: 1730, 1670, 1620, 1600, 1580, 1230, and 1100 cm^{-1} . Salt IIb, with mp 203° (from glacial acetic acid), was also obtained in 60% yield. IR spectrum: 1735, 1640, 1620, 1570, 1500, 1210, and 1100 cm^{-1} .

Pyrylium salts II are converted quantitatively to the previously unknown 2-alkyl-9-oxobenzofuro[3,2-c]pyridines (III) by the action of anhydrous ammonium acetate in glacial acetic acid. For example, IIIa was obtained in 60% yield as yellow crystals with mp 58° (from alcohol). IR spectrum: 1670, 1610, 1580, and 1240 cm^{-1} . Salt IIIb, with mp 253° (from alcohol), was obtained in 82% yield, mp 253°C (from alcohol), IR spectrum: 1670, 1610, 1570, 1385, 1240 cm^{-1} .

The results of elementary analysis of IIa,b and IIIa,b were in agreement with the calculated values. The IR spectra of mineral oil suspensions of the compounds were recorded.

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