

REACTION OF AZIDES WITH INDOLE AND WITH ALKYLPIRROCOLINES

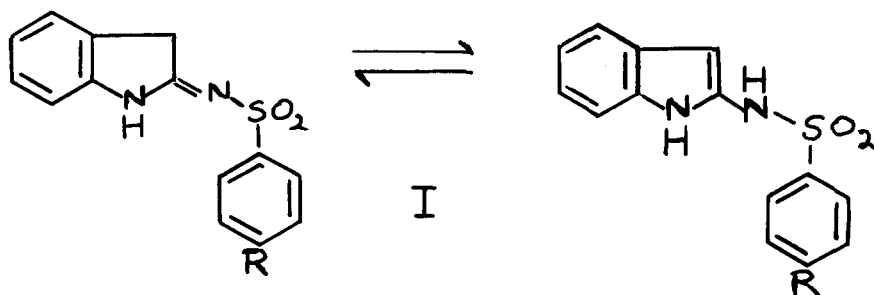
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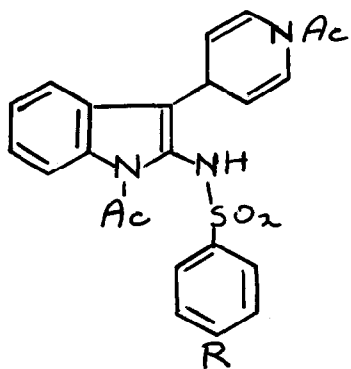
It has recently been reported (1) that indolyl magnesium salts react with tosyl azide to give tars. In contrast we have observed that indole itself reacts smoothly at 50° with tosyl azide and with *N*-acetylsulphanilyl azide to form (I) [yield of Ia 50%; Ib 72%]. The structures are supported by mass spectral and analytical data. The n.m.r. spectra of (I) indicate that the compounds are mixtures of two isomers in approximately equal amounts. Acetylation of (Ia) in pyridine gave (IIa) [c.f. reaction of indole (2)].

We have also extended to reactions of azides with heterocyclic compounds (3) by examining the reaction of alkylpyrrocolines with picryl azide and with tosyl azide under neutral conditions. For example, 2-methylpyrrocoline gave a good yield of (III) with either azide. The reaction is very much faster than the corresponding reaction with alkylindoles, solid separating from solution of the components within two minutes in contrast to the 24 hours for 2-methylindole.

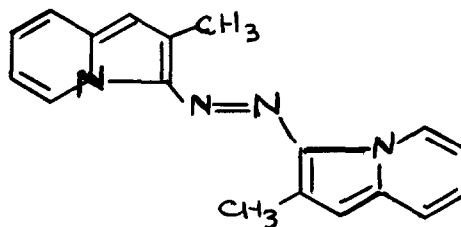


a, R = CH₃

b, R = NH.CO.CH₃



II



III

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