

ON THE REACTION OF QUINAZOLINE WITH AROMATIC ALDEHYDES
IN THE PRESENCE OF POTASSIUM CYANIDE:
EXTENSION OF THE BENZOIN CONDENSATION

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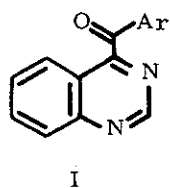
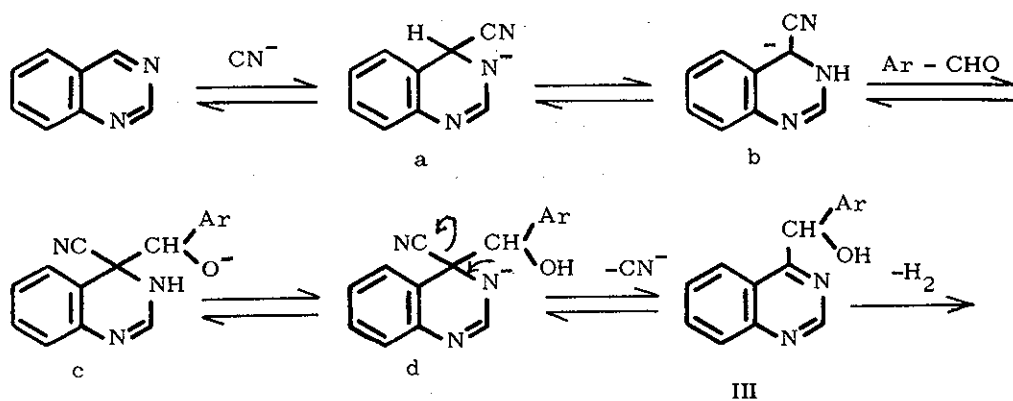
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When a mixture of quinazoline and aromatic aldehyde was treated with cyanide ion, aryl 4-quinazolinyl ketone (I) was obtained together with 4,4'-biquinazoline (II), in poor yield. Typically, in the case of *o*-anisaldehyde and *m*-chlorobenzaldehyde, 2-methoxyphenyl 4-quinazolinyl ketone (I-1), 3-chlorophenyl 4-quinazolinyl ketone (I-2), and α -(2-methoxyphenyl)-4-quinazolinemethanol (III-1) and α -(3-chlorophenyl)-4-quinazolinemethanol (III-2) were obtained, respectively, together with II.

The reaction with benzaldehyde which was substituted with strongly electron donating (such as dimethylamino and hydroxyl group) or strongly electron attracting groups (such as nitro and cyano group) did not give any of the corresponding I. Especially, in the case of nitrobenzaldehyde, the corresponding dimethyl azodibenzoate (IV) and dimethyl azoxydibenzoate (V) were obtained.

Although there were two possible reaction processes for the formation of I, path A and B, which were similar to that of a cross benzoine condensation and oxidation in successive steps, it might be considered that this cross benzoine type condensation might proceed by path A rather than path B.

Path A



Path B

