

Both *p*- and *m*-resorcylic acids on heating with glacial acetic acid in the presence of anhydrous zinc chloride (2 mol.) for 5-7 minutes underwent decarboxylation and gave resacetophenone in 55 and 50% yields respectively. On the other hand, *o*-resorcylic acid failed to react with acetic acid even in the presence of a large excess of zinc chloride (10 moles), anhydrous aluminium chloride or BF_3 and was recovered unchanged in almost quantitative yields. *p*-Resorcylaldehyde under the conditions of the Nencki reaction afforded a brownish dark solid from which no definite substance could be isolated except the original aldehyde in traces (identified as 2, 4-DNP). Resacetophenone was recovered unchanged in the Nencki reaction with acetic acid under different conditions.

However, both 2-methyl- and 4-ethyl-resorcinols reacted with acetic acid and ZnCl_2 to yield the corresponding ketones, namely, 2, 4-dihydroxy-3-methylacetophenone, m.p. 156° (prepared previously by Hoesch reaction¹) (2, 4-DNP m.p. above 300°) and (2, 4-dihydroxy-5-ethylacetophenone², m.p. 116°) (2, 4-DNP m.p. 236°) in about 70% yields.

It therefore appears that electron withdrawing groups hinder the reaction whereas electron repelling groups favour it. An exception is orcinol which does not undergo the Nencki reaction.

Also, decarboxylation during the Nencki was not observed in the case of the *o*- and *m*-cresotic acids which were recovered unchanged.

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1. Rangaswami, S. and Seshadri, T. R., *Proc. Ind. Acad. Sci.*, 1938, 8 A, 214.
2. Richard, W. and Adalbert, K., *Montash*, 1929, 51, 386.

SOME OBSERVATIONS ON THE NENCKI REACTION WITH RESORCINOL DERIVATIVES

IN the course of our work on the synthesis of aromatic ketones, we happened to study the Nencki reaction on some resorcinol derivatives, when some interesting observations were made which are reported here.