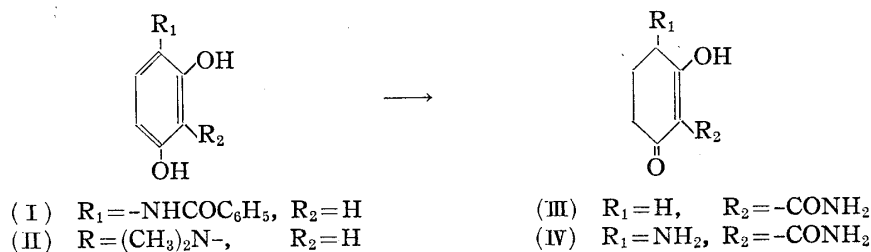

 Communications to the Editor

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Reduction of 2,4-Disubstituted Resorcinols

As a part of studies on the synthesis of tetracycline analogs, an attempt has been made to prepare the A ring in tetracycline structure. Various derivatives of resorcinol were hydrogenated in the presence of alkali by employing palladium on carbon or Raney nickel as the catalyst, and the corresponding 1,3-cyclohexanedione derivatives were obtained. These compounds were confirmed by ultraviolet absorption spectrum.

In this reaction, it was found that the hydrogenation of the compounds, which are generally resistant to hydrogenation, would be readily effected by adjusting the reaction mixture to pH 8~9.



(I) 4-Benzamido: m.p. 175~177°; $\lambda_{\text{max}}^{\text{MeOH}}$ 225 and 280 m μ (log ϵ 4.06 and 4.41); *Anal.* Calcd. for $\text{C}_{13}\text{H}_{13}\text{O}_3\text{N}$: C, 67.52; H, 5.67; N, 6.06. Found: C, 67.74; H, 5.51; N, 6.01.
 (II) 4-Dimethylamino hydrochloride: m.p. 193°(decomp.); $\lambda_{\text{max}}^{\text{MeOH}}$ 279.5 m μ (log ϵ 3.46); *Anal.* Calcd. for $\text{C}_8\text{H}_{12}\text{ON}\cdot\text{HCl}$: C, 50.10; H, 7.37; N, 7.37. Found: C, 49.76; H, 7.03; N, 7.24.
 (III) 2-Carbamoyl: m.p. 104~107°; $\lambda_{\text{max}}^{\text{MeOH}}$ 258 m μ (log ϵ 4.23), *Anal.* Calcd. for $\text{C}_7\text{H}_9\text{O}_3\text{N}$: C, 54.19; H, 5.85; N, 9.03. Found: C, 53.82; H, 5.60; N, 9.13.
 (IV) 2-Carbamoyl-4-amino hydrochloride: m.p. 280°(decomp.); $\lambda_{\text{max}}^{\text{MeOH}}$ 257 m μ (log ϵ 4.36), *Anal.* Calcd. for $\text{C}_7\text{H}_{10}\text{O}_3\text{N}_2\cdot\text{HCl}$: C, 40.66; H, 5.37; N, 13.56. Found: C, 40.65; H, 5.23; N, 13.33.

Methylation of the compound (IV) gave 2-carbamoyl-4-dimethylamino derivative. Details of these experiments will be presented in the near future.

Osaka Research Laboratory,
 Tanabe Seiyaku Co., Ltd.
 Honjo-Kawasaki-cho,
 Ohyodo-ku, Osaka.

Koichi Tomino (富野耕一)

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