

CCLII.—*Phenoxyethylaniline and Related Compounds.*
Part I.

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β -PHENOXYETHYLANILINE and β -phenoxydiethylaniline have been prepared by the action of phenyl β -chloroethyl ether on aniline and ethylaniline, respectively (Clemo and Perkin, J., 1922, **121**, 642). These compounds and others of a similar nature can be readily prepared by heating phenoxyethyl toluene-*p*-sulphonate (Peacock and Po Tha, J., 1928, 2303) and the corresponding amines in the presence of an aqueous solution of rather more than the calculated amount of sodium carbonate. Phenoxyethyl toluene-*p*-sulphonate does not appear to react with dimethylaniline when heated on a water-bath for more than 20 hours. The measurement of reaction velocities with esters of toluene-*p*-sulphonic acid is being undertaken.

EXPERIMENTAL.

β -*Phenoxyethyl-o-toluidine* was prepared by stirring for 5 hours on a water-bath a mixture of sodium carbonate (5.3 g.), water (53 c.c.), β -phenoxyethyl toluene-*p*-sulphonate (29 g.), and *o*-toluidine (21 g.). The mixture was then made alkaline and the excess of *o*-toluidine removed by steam distillation. The phenoxyethyl-*o*-toluidine (22 g.), after crystallising from alcohol or light petroleum, had m. p. 64° (Found: C, 77.9; H, 8.1; N, 6.1. $C_{15}H_{17}ON$ requires C, 78.3; H, 7.5; N, 6.1%). Its salts are readily hydrolysed by

water and can only be crystallised in presence of an excess of the acid.

The following compounds were prepared in a similar way: β -Phenoxyethyl-*p*-toluidine, m. p. 52° (Found: C, 77.7; H, 7.5; N, 6.1%); β -phenoxyethyl-*m*-toluidine, b. p. $220^\circ/13$ mm. (Found: N, 6.1%); β -phenoxyethylaniline; β -phenoxydiethylaniline, b. p. 212 — $213^\circ/17$ mm. (Found: N, 5.8. Calc.: N, 5.8%) (compare Clemo and Perkin, *loc. cit.*); β -phenoxyethyl-*p*-chloroaniline, b. p. $228^\circ/11$ mm. (Found: Cl, 13.5; N, 5.7. $C_{14}H_{14}ONCl$ requires Cl, 14.3; N, 5.65%).

β -Phenoxyethyl- α -naphthylamine was prepared by boiling under reflux for 11 hours a mixture of α -naphthylamine (19.1 g.; 0.125 mol.), phenoxyethyl toluene-*p*-sulphonate (29 g.; 0.10 mol.), sodium carbonate (5.3 g.), and water (53 c.c.). After crystallising from alcohol it had m. p. 106° (Found: C, 82.4; H, 6.1; N, 5.3. $C_{18}H_{17}ON$ requires C, 82.1; H, 6.5; N, 5.3%).

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