XVIII.—*Note on a Phenyllic Salt of Phenylthiocarbamic Acid.*

By AUGUSTUS E. DIXON, M.D., Professor of Chemistry, Queen's College, Galway.

PHENYLTHIOCARBIMIDE and pure phenol, in molecular proportion, were heated in a sealed tube for two hours, at 140—150°. The product, a mobile, brown liquid, smelling of both constituents, gradually deposited small, hard crystals; these, after being well washed with alcohol, pressed, and dried, melted between 149° and 151°.

A determination of sulphur was made with the following result:—

0.2145 gram, treated with NaOH and KNO₃, afforded 0.2103 gram BaSO₄,

or, S = 13.48 per cent.

Calculated for C₁₃H₁₁NSO, S = 13.99 per cent.

The interaction is thus formulated:—

The yield is very small, not more than 7 per cent. of the theoretical; heating for four hours at 150°, or for two hours at 200°, reduced it still further.

Phenyllic phenylthiocarbamate, obtained as above, occurs in small, well-formed, octohedral crystals resembling sulphur in appearance and colour.

It is almost insoluble in water, but dissolves in alcohol; the alcoholic solution gives a black precipitate with ammoniacal nitrate of silver, and is also freely desulphurised by warming with alkaline lead tartrate. On heating, either alone, or with caustic soda, it is readily decomposed with evolution of phenylthiocarbimide.

It is right to add that all the experimental work in connection with the present communication was carried out in the Chemical Laboratory of Trinity College, University of Dublin.

*Chemical Laboratory, Queen's College,
Galway.*