XXI.—*On Oxaniline.*

By Dr. R. Schmidt, Assistant at the Chemical Institute of Marburg.

[Communicated by Prof. Kolbe.]

Preliminary Notice.

Nitrosalicylic acid is easily converted, by treatment with tin and hydrochloric acid, into amidosalicylic acid, a compound which crystallizes in splendid needles, and like most other amido-acids forms salts both with bases and with the stronger acids.

One of the numerous products of the decomposition of amidosalicylic acid which I have investigated, is oxaniline. This body is produced quite simply by the destructive distillation of amidosalicylic acid; and if the acid to be heated is previously mixed with twice its weight of powdered pumice, a tolerably abundant product will be obtained. The decomposition is represented by the equation:

$$\underbrace{HO.\left(C_{12}\left\{\begin{matrix}H_4\\H_2N\end{matrix}\right\}O_2\right)\left[C_2O_2\right]O}_{\text{Amidosalicylic acid.}} = \underbrace{\left.\begin{matrix}C_{12}H_5O_2\\H_2\end{matrix}\right\}N}_{\text{Oxaniline.}} + C_2O_4$$

The sublimate obtained consists, partly of white needles, partly of a fused brown crust, smelling of ammonia and phenic acid. These secondary products are easily removed by treatiug the sublimate with alcohol slightly acidulated with acetic acid, the oxaniline then remaining as a white scentless mass.

Oxaniline is soluble in hot water and hot alcohol, and separates on cooling in wedge-shaped crystals, mostly somewhat coloured. The hot aqueous solution likewise turns brown when exposed to the air, and deposits a brown amorphous substance.

Oxaniline in aqueous solution very easily reduces the solutions of the noble metals, assuming at the same time a splendid violet colour. The same colouring is produced by nitric acid, when a few drops of it are added to the aqueous solution of the oxyaniline.

A very characteristic reaction of oxaniline is the fine deep indigo colour which its aqueous solution acquires by mixture with an alkaline liquid: this colour disappears, however, on addition of an acid.

Oxaniline unites very easily with chlorhydric, bromhydric, iodhydric, sulphuric, and other acids, forming soluble salts which crytallise with great beauty. The perfectly neutral solutions of these salts undergo a gradual alteration when exposed to the air; but in acid solution the salts are permanent.

I am still engaged with the further investigation of this interesting base, particularly with the view of exactly determining its relations to aniline.