NOTES

The β-Chlorovinyl-arsines.[1]—The work of Miller and Witherspoon[2] has shown that the compound obtained by reacting β-chlorovinyl-dichloro-arsine with diphenylamine is not 6-β-chlorovinyl-phenarsazine, as reported in the above entitled article, but 6-chloro-phenarsazine. The compound is extremely difficult to obtain pure by crystallizing from solvents. Five crystallizations from xylene gave a product melting at 189° (uncorr.). By vacuum sublimation, Miller reports a melting point of 193–194°.

Similar correction should hold for the product obtained when phenyl-α-naphthylamine is condensed with β-chlorovinyl-dichloro-arsine. Thus in both cases the amines apparently condense with arsenic chloride, present as a result of decomposition or equilibrium, giving a chloro-arsine and not a chlorovinyl-arsine.

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Preparation of Benzene-azo Derivatives of 8-Hydroxyquinoline.—According to J. Mathëus,[1] the alkaline coupling of 8-hydroxyquinoline with diazobenzene-chloride gives 5-benzene-azo-8-hydroxyquinoline. In the present work, which was executed to obtain such a compound for use in the Skraup reaction with certain azo compounds, when diazobenzene-chloride and 8-hydroxyquinoline were coupled in equimolecular proportion in an alkaline medium with as small an amount of water as possible, the chief product obtained was found to be 5,7-benzene-disazo-8-hydroxy-quinoline, which after three recrystallizations from alcohol gave deep violet crystals of excellent purity; m. p. 205–206°; yield, 16 g. from 14.5 g. of 8-hydroxyquinoline. Its alcoholic solution assumes a red color, and the solution in concd. sulfuric acid is indigo blue, but on addition of alcohol the color changes to violet red.

Anal. Subs., 6.320: CO_2, 16.558; H_2O, 2.488. Subs., 3.115, 1.897: N_2, 0.576 cc. (30°, 762 mm.) 0.344 cc. (31°, 756 mm.). Calcd. for $C_{21}H_{15}ON_5$: C, 71.39; H, 4.25; N, 19.83. Found: C, 71.45; H, 4.37; N, 20.08, 19.41.

On the other hand, when the coupling was conducted in a very dilute solution, the mono-azo compound was the chief product, which after four recrystallizations from alcohol gave brownish-yellow needles (m. p. 185–186°); its properties were identical with those of 5-benzene-azo-8-hydroxy-quinoline given by Mathëus. The mono-azo compound, however, was

[1] "The β-Chlorovinyl-arsines and their Derivatives," W. Lee Lewis and H. W. Stiegler, This Journal, 47, 2546 (1925).

[2] Unpublished, Chemical Division, Edgewood Arsenal, Maryland.

[1] Mathëus, *Ber.*, 21, 1644 (1888).