

A New Method for the Synthesis of Arylstibonic Compounds

Preliminary Communication

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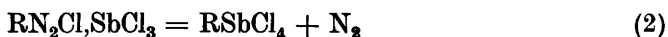
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In a recent paper Hanby and Waters¹ have shown, that arylarsines are formed in following reaction (in acetone suspension):

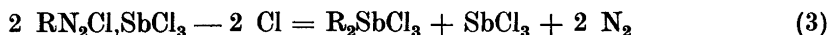


While working on the preparation of some antimony compounds, I have found a similar procedure advantageous.

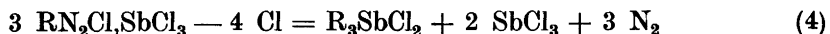
By adding antimony trichloride to a diazonium salt solution, a double salt, of the composition $\text{RN}_2\text{Cl}, \text{SbCl}_3$ is formed in nearly quantitative yield.² The intention was to decompose this salt under such conditions that:



would be the main reaction, but I found, that only compounds with reducing power were catalytically active, and therefore (2) was more or less accompanied by:



and:



Suspended in dry acetone the double salts are decomposed at 0° C by sodium iodide, iron, ferrous chloride, copper, cuprous chloride etc. Also many organic compounds, for instance formaldehyde, hydroquinone, etc., catalyze the decomposition, but require acetone with 5—10 % water.

With sodium iodide the yield of stibonic acid is as good as or better than by the Scheller reaction³ and only small amounts of diarylstibonic chloride are formed. With iron (ferrum reductum) as a catalyst, (3) is the main reaction and the diarylstibonic chloride is formed in good yield. The experimental data and discussion of the reaction will be published later.

REFERENCES

1. Hanby, W. E., and Waters, W. A., *J. Chem. Soc.* (1946) 1029.
2. May, P., *J. Chem. Soc.* **101** (1912) 1037.
3. Scheller, X., Brit. pat., 261026 (1925) (*C. A.* **21** (1927) 3 371).

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