

38. Study on the Aromatic Stibonic Acid. (VI)

Hajime Tomono, Yutaka Yamakawa and Risaburo Nakai

(Ogiu Laboratory)

The modification of Bart's reaction involving the use of aryldiazonium borofluoride in place of the usual diazonium chloride (Ruddy *et al.*, J.A.C.S. 64, 828 1942) has been applied to the preparation of aryl stibonic acids. To the freshly prepared sodium antimonite solution, the solid aryldiazonium borofluoride is added slowly under vigorous stirring at 0°C. On acidifying the reaction products, aryl stibonic acids are precipitated with inorganic impurities. They are purified by ordinary process, converting to aryl stibonic chlorides, in the following yields.

	Aryldiazonium	
	borofluoride	chloride
Phenylstibonic acid.	25,3%	48%
p-Tolylstibonic acid.	41,1	55
p-Nitrophenylstibonic acid.	9,3	35

As a modification of Scheiler's method (C.A. 21, 3371 1927), the methanol (or acetone) solution of aryldiazonium borofluorides has been decomposed in the presence of antimony trichloride and a trace of cuprous chloride. Pouring the reaction products in water, stibonic acids are precipitated with resinous matter and further purified through converting to aryl stibonic chloride. The yields are as follows:

	Aryldiazonium		
	methanol	borofluoride acetone	antimony tetrachloride acetone
Phenylstibonic acid.	10,0%	6,2%	60%
p-Tolylstibonic acid.	31,9	25,1	87
p-Nitrophenylstibonic acid.	4,1	—	55

The yields of arylstibonic acids from the borofluorides are lower than those obtained by the use of the customary aryldiazonium chloride and are not favoured by the use of organic solvent. In general, the remarkable resinification is observed in the usage of diazonium borofluoride and especially a significant depression of the yield is conducted, if a nitro group is present in the para position.