

NOTE

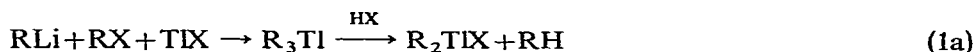
AN OBSERVATION ON THE PREPARATION OF R₂TlX TYPES

H. GILMAN AND R. G. JONES

Department of Chemistry, Iowa State University, Ames, Iowa 50010 (U.S.A.)

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In an interesting paper¹ concerned with the synthesis of di-n-alkylthallium(III) bromides, reference is made to the following reactions of a synthesis previously described by us²:



The statement is made that "Method (1a) although apparently straightforward, actually involves the intermediacy of R₃Tl and the formation of the highly pyrophoric and explosive R₃Tl which must be carefully hydrolyzed with strong acid". In our report² it is stated that the trialkylthallium compounds do not have to be isolated or handled, and do not have to be hydrolyzed carefully with strong acid. In each of our experimental examples, a statement is made that water is added to the reaction mixture to give the R₂TlX compound (in high yield, up to 99% and 100% in some cases). The yields of the di-n-alkylthallium(III) bromides listed by them¹ fall in the range of 21% to 56%.

It appears that our procedure may have some merit for several reasons:

- (1) All of the thallium, rather than only one-third (theoretically), is converted into the R₂TlX compound.
- (2) The yields are very high.
- (3) The method is applicable to aryl as well as alkyl compounds.

REFERENCES

- 1 A. McKillop, L. F. Elsom and E. C. Taylor, *J. Organometal. Chem.*, 15 (1968) 500; see also, N. A. Nesmeyanov and R. A. Sokolik, *Methods of Elemento-Organic Chemistry, Vol. 1. The Organic Compounds of Boron, Aluminum, Gallium, Indium and Thallium*, North-Holland Publishing Company, Amsterdam, 1967.
- 2 H. Gilman and R. G. Jones, *J. Amer. Chem. Soc.*, 72 (1950) 1760.
J. Organometal. Chem., 18 (1969) 348