

THE REACTION BETWEEN NEUTRAL LEAD MERCAPTIDES AND SULFUR

Sir:

The reaction between neutral lead mercaptides and sulfur in benzene solution leads to the formation of lead disulfide and organic polysulfides [W. E. Duncan and Emil Ott, *THIS JOURNAL*, **53**, 3940 (1931)].

Preliminary work on the similar reaction with basic lead mercaptides indicated an analogous reaction with the formation of basic lead polysulfides of the type $\text{HOPbS}_x \cdot \text{PbOH}$ [Emil Ott and E. E. Reid, *Ind. Eng. Chem.*, **22**, 884 (1930); **22**, 878 (1930)].

This reaction was now studied more extensively with basic *sec.*-butyl lead mercaptide. The relatively stable yellow-orange (light reddish-brown when dry) precipitate obtained by the addition of sulfur in benzene solution was definitely established to be a mixture of basic lead polysulfides of the type mentioned above. Most mixtures may simply be described as containing the compounds with $x = 3$ and $x = 4$, but in some cases $x = 5$ is additionally present.

Thorough qualitative tests and quantitative analyses for lead, sulfur, hydrogen and carbon established composition and constitution of the products.

Since the basic *sec.*-butyl lead mercaptide cannot be prepared entirely free from neutral *sec.*-butyl lead mercaptide, a certain amount of lead disulfide is also formed, the amount of which can be predicted accurately from the analysis of the mercaptide solution. Thus no uncertainty is introduced into the final analyses. It lies in the nature of the problem that no individual compounds could be isolated; for the same reason this abbreviated communication seemed necessary.

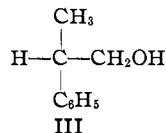
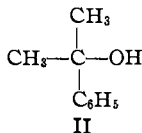
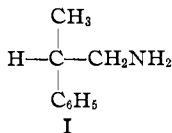
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REARRANGEMENTS BY THE ACTION OF NITROUS ACID ON AMINES OF THE TYPE $\text{CH}_3\text{CH}(\text{C}_6\text{H}_5)\text{CH}_2\text{NH}_2$

Sir:

The amine I on treatment with nitrous acid should form, on the basis of observations made on aliphatic amines of this type, two isomeric carbinols,



II in predominating proportion and III in much smaller proportion. In the case of the optically active amine, the first carbinol should be optically