

THE THERMAL INTERCONVERSION OF MIXED BENZOINS

Sir:

The appearance of a paper by E. Margaret Luis [*J. Chem. Soc.*, 2547 (1932)] on the "Interconversion of Mixed Benzoins," and of an article by Buck and Ide [THIS JOURNAL, 54, 4359 (1932)] in which they describe attempts to effect the same interconversion, induce us to report that, in the course of certain of our experiments on the reaction of arylamines with α -hydroxy and α -bromo ketones, we have been able to effect the partial transformation of anisbenzoin, p - $\text{CH}_3\text{OC}_6\text{H}_4\text{CHOHCOC}_6\text{H}_5$, into benzanisoin, p - $\text{CH}_3\text{OC}_6\text{H}_4\text{COCHOHC}_6\text{H}_5$, by simply heating the former above its melting point. The same transformation is effected quantitatively by distillation of anisbenzoin in vacuum (1 mm.).

We have found that anisbenzoin, which we have prepared both by the method of Asahina and Terasaka [*J. Pharm. Soc. Japan*, 494, 219 (1923)] as well as by the method of McKenzie, Luis, Tiffeneau and Weill, *Bull. soc. chim.*, 45, 414 (1929)], melts at 89° when pure. This melting point was given by Asahina and Terasaka, while McKenzie and his collaborators give 100 – 101° as the melting point. The crystals melting at 89° have been examined by us under the microscope and seem to be perfectly pure. We have found that through slow heating, and then subsequent cooling, of the anisbenzoin (m. p. 89°) its melting point can be altered. After a number of such treatments, its melting point rises to a value approximating the melting point given by McKenzie and his collaborators. We are therefore of the opinion that the 101° compound of McKenzie and his co-workers is already a mixture of the benzanisoin (m. p. 106°) and the anisbenzoin (m. p. 89°).

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NEW BOOKS

Chemical Analysis by X-Rays and its Application. By GEORG VON HEVESY. The George Fisher Baker Non-Resident Lectures in Chemistry at Cornell University, 1931. The McGraw-Hill Book Company, Inc., 330 West 42d Street, New York, 1932. 333 pp. Price, \$3.00.

This volume contains the lectures delivered by Professor Georg von Hevesy at Cornell University in the winter of 1931–32 during his tenure of the George Fisher Baker Non-Resident Lectureship at that institution.

The introductory lecture is entitled "The Age of the Earth." This is followed by three series of lectures, the subjects of each series being as follows: the first series, of ten lectures, "Analysis by Means of X-Rays";