Acknowledgment

The authors wish to acknowledge their indebtedness to the late Professor Victor Lenher of the University of Wisconsin and to Dr. S. J. Dickinson of the American Smelting and Refining Company for valuable suggestions as to the precipitation of selenium from selenates by the potassium iodide method.

Summary

The Parr bomb fusion method has been adapted to the analysis of organic selenium compounds. The conditions for the precipitation of the selenium from the solution of the melt have been worked out.

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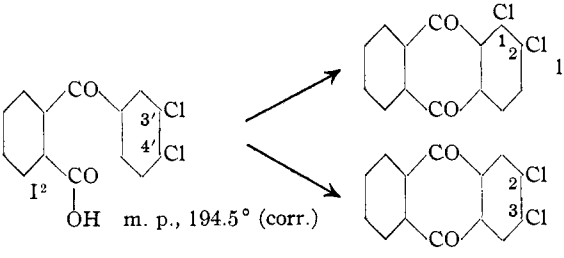
NOTES

The Formation of 1,2-Dichloro-anthraquinone and 2,3-Dichloro-anthraquinone from *o*-Dichlorobenzene.—Phillips states[1] that dichloro-benzoylbenzoic acid of the constitution shown in Formula I does not give



any 1,2-dichloro-anthraquinone on condensation with concentrated sulfuric acid. This statement is erroneous as I have shown[3] that there is always formed about 13% of 1,2-dichloro-anthraquinone, which remains in the sulfuric acid after the condensation and crystallizes on diluting the acid in little leaflets. The substance melts, contrary to the statement of Ullmann,[4] at 196.5° (corr.), and not at 207°.

I may add that Phillips' observations are, on the other hand, quite in agreement with ours. The 1,2-dichlorobenzene was quite pure, being especially made for us by the Aktiengesellschft für Aniline Fabrikation in Berlin. I have already published this fact on page 488 of my "Künstliche Organische Farbstoffe" (Berlin, 1926). The yield of the 3′,4′-dichloro-benzoylbenzoic acid was in our best experiments 35%.[5]

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[1] Phillips, THIS JOURNAL, **49**, 473–478 (1927).

[2] The sodium salt as well as the potassium salt is sparingly soluble.

[3] E. Senn, *Dissertation*, Swiss Technical High School, **1923**.

[4] See Ullmann, Encyklopaedia.

[5] Ref. 3, p. 29.

Note.—The work of Emil Senn upon which Professor Fierz-David bases his objection to a statement which occurs in my paper (THIS JOURNAL, **49,** 473 (1927)) unfortunately was never published in any chemical journal, nor have I been able to find any reference to it or abstract of it in *Chemical Abstracts, Chemisches Zentralblatt* or in the *British Chemical Abstracts.* I learned of this work quite recently and have since carried out the condensation of 3′,4′-dichloro-2-benzoylbenzoic acid according to the directions given in Senn's dissertation and succeeded in obtaining 4% of the total yield of 1,2-dichloro-anthraquinone. The inference that one might draw from the statement in my paper that no 1,2-dichloro-anthraquinone is formed in this condensation is therefore incorrect and I wish to correct it accordingly. I may add, finally, that in my experiments the yield of 3′,4′-dichloro-2-benzoylbenzoic acid was invariably 70% or better.

M. PHILLIPS

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NEW BOOKS

General Inorganic Chemistry. By M. CANNON SNEED, Professor of Chemistry, University of Minnesota. Ginn and Company, 15 Ashburton Place, Boston, 1926. vi + 674 pp. 132 figs. 21.5 × 14.5 cm. Price, $3.00.

In this textbook, written for students beginning a college course in chemistry, descriptive and theoretical matter are well balanced, probably more so in the first thirty-one chapters than in the remaining fifteen, which are given over largely to descriptive matter on the metals; but in this latter part we find special coördinating chapters on "Ionic Equilibria," "Colloids," "Chemistry in Living Processes" (written by R. A. Gortner), "Electrochemistry" and "Radioactivity." In arrangement and method of presentation, the author has followed a conservative course. Modern theories and recent industrial applications, however, have not been neglected. The structure of the atom is adequately presented in the splendid chapter on "The Periodic System," and the electron concept as applied to chemical changes is clearly and fully illustrated by well-chosen examples in the chapter on "Oxidation and Reduction."

The style is clear; fundamentals are emphasized by a judicious use of heavy type; misprints and mistakes are very rare; the format is of high standard; most of the diagrams of apparatus show complete setups; the illustrations include twelve full-page portraits of noted chemists; the historical matter interspersed adds interest and introduces the human element; nearly every chapter is closed with a limited but well-chosen set of questions and exercises of the type which require careful thought and induce discussion in class conferences; a serious, scientific tone