Abstracts from Other Journals

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Properties of Cholesterol Obtained from Different Sources. R. J. Anderson. (*J. Biol. Chem.*, 1927, 71, 407-418.)—Attention is called to the fact that cholesterol preparations obtained from different sources show slight differences in physical properties. In order to determine whether different cholesterol preparations are homogeneous it would be necessary to prepare cholesterol esters of various acids or some other derivatives of cholesterol, fractionally recrystallize them, and compare the properties of the different fractions. When apparently pure cholesteroyl acetate was fractionally recrystallized from ethyl alcohol a bottom fraction was separated which possessed a much lower melting point and a lower optical rotation than the top fraction—probably due to a small amount of a substance having a lower rotation than ordinary cholesterol. It is possible that a derivative other than the acetate, and a solvent better than alcohol might be found that would cause a more effective separation. If cholesterol is formed from plant sterols, a number of different, as well as isomeric, cholesterols might be expected to occur in animal fats, corresponding to the various phytosterols contained in the plant material which serves as food. P. H. P.

Distribution of Dihydrositosterol in Plant Fats. R. J. Anderson, F. B. Nabenhauer and R. L. Shriner. (*J. Biol. Chem.*, 1927, 71, 389-399.)—Previous work on the sterols is discussed. The saturated sterol, dihydrositosterol, $C_{27}H_{47}OH$, appears to be rather widely distributed in plant fats. It occurs in association with unsaturated sterols, not only in the endosperm and bran of maize and wheat, but also in small amounts in the oils obtained from the germ of these grains. Appreciable quantities of the substance have been isolated from maize gluten, maize bran, wheat bran, rice bran, maize oil and wheat germ oil. The dihydrositosterol preparations that have been obtained from different sources show slight variations in physical properties. The melting points vary from 141-142° to 145-146° C., and the specific optical rotations vary from about +23° to +25°. The acetyl derivatives vary in melting points from 137° to 141° C., and in optical rotation from about +13° to +14°. Whether these variations in properties depend upon the degree of purity or are due to the presence of isomeric saturated sterols, cannot be determined from the present data. The dihydrositosterol which occurs in plant fats appears to be identical with the synthetic sitostanol which is obtained when an unsaturated sterol, which possesses the properties usually ascribed to sitosterol, is reduced with hydrogen in the presence of platinum black. The properties and composition of the various dihydrositosterol preparations that have been isolated are summarized in a table in comparison with the synthetic sitostanol.