TECHNICAL SECTION

JOURNAL OF Agricultural and Food Chemistry

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Plant Growth Regulating Activity of Some IPC Analogs

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• Some insight into the mechanism of action of carbamate herbicides is given in the study by George, Moore, Brian, and Garman. A series of carbamates, analogous to isopropyl N-phenylcarbamate (IPC) and in which various substitutions were made for the alcohol portion, were screened for their herbicidal and growth-modifying activities. Such changes exerted profound effects upon the biological activities of the compounds. The authors consider the allyl, 3-butenyl, 2-chloroethyl, and the 2-(1,-chloropropyl) esters to be more active than IPC. It is pointed out that carbamates could be considered to conform to current ideas about chemical structure and plant growth regulating activity, if it is assumed that separation of the carboxyl group from the ring by a nitrogen atom is approximately equivalent to separation by a carbon atom and that all compounds have sufficient free rotation to attain the required ring-carboxyl spatial arrangement.

Source of Poultry Flavor; Ascorbic Acid Destroys Fruit Color; Antibiotic Ice

pages 364 to 375

• Does poultry flavor come from the bones, the fat, the skin, or the meat? A report on an experiment designed to answer this question, as a preliminary step in an inquiry into the chemical constituents of poultry flavor, comes from Pippen, Campbell, and Streeter. They conclude that fat contributes to the aroma of broth but is otherwise of minor importance to flavor. Meat was the best source of flavor—better than skin or bones and better than a composite of all three parts. Flavor precursors were extracted from cut-up raw meat with cold water. • Confirmation of the findings that ascorbic acid and anthocyanin pigment react, causing the destruction of color of fruit juice, is presented by Pratt, Balkcom, Powers, and Mills. Their results also indicate that riboflavin may contribute to the instability of the anthocyanin pigments. Spectrophotometric determinations showed that red color was lost in the first 24 hours for samples containing ascorbic acid and fruit colors. • The paper on "antibiotic ice," which sparked the imagination of many at the Symposium on Nontherapeutic Uses of Antibiotics at last fall's ACS meeting, is presented in this issue. Tarr, Boyd, and Bissett discuss the results of their use of ice containing 1 to 4 p.p.m. chlorotetracycline to protect fresh fish from bacterial spoilage. Data concerning the antimicrobiological effects of puromycin and thiolutin are also included.

Quicker Method for Determining Fat in Liver

pages 375 to 377

• A new method of determining fat in liver is suggested and compared with the rather lengthy AOAC method by Bixby, Bosch, Elvehjem, and Swanson. The new method is a modification of the technique of wet ether extraction used in the dairy and food industry. Fat values obtained by the proposed technique, which consists of a mixed solvent of ethyl ether, petroleum ether, and ethanol in a dry Goldfish extractor, are higher than those obtained by the AOAC method of dry ethyl ether extraction. The authors suggest that traces of moisture left in the homogenate may make some of the fat inaccessible to the ether in the AOAC method, since water and ether are only slightly soluble in each other.