TECHNICAL SECTION

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Off-Flavors in Peanut Butter May Be Due to BHC Decomposition

pages 772 to 778

• A problem with the use of benzene hexachloride on cotton has been the off-flavors developed in peanuts which followed cotton in the rotation. Reynolds, Gilpin, and Hornstein conducted experiments to determine palatability of peanuts grown after cotton which was dusted with BHC. Because preliminary work with selecting and training taste panel members showed considerable variation in sensitivity among individuals, only those with highest sensitivity to the flavor were chosen. Chemical analyses correlated generally with panel members' scores. No detection of off-flavor was made when technical BHC was used, even though it was added to peanut butter in amounts in excess of those found in the peanuts grown after BHC-treated cotton. Their work suggests that off-flavor is not entirely due to the BHC content, leading to the conclusion that off-flavor may be due to decomposition products of BHC. • Radioactive carbon-labeled DDT is useful in studying the metabolic fate of DDT in insects. A synthesis of DDT labeled with carbon-14 in the tertiary position is presented by Pearce and Jensen. The following steps were employed: barium carbonate to ethyl acetate to ethyl alcohol to choral to DDT. Yield was 42% based on ethyl alcohol.

Preparation of Saccharic Acid as Possible New Industrial Chemical

pages 779 to 783

• If saccharic acid could be made available at a low cost, there are many possible uses it could be put to in the food processing field and as sequestrants for metal ions in alkaline solutions. Starch and dextrose, of all the possible raw materials for making saccharic acid, have the happy combination of favorable structure, availability, and low cost for practical starting materials. Mehltretter and Rist prepared saccharic acid from corn by the nitric acid oxidation of corn sugar. With one mole of dextrose and four moles of nitric acid at 55° to 75° C. for an hour, the yield is 41%. By-product sugar acids may be converted to oxalic acid in a yield of 44% of theory. • Present tests for detecting the addition of ethylvanillin to imitation or pure vanilla extract have disadvantages such as requiring too much time, requiring the use of three special reagents, or permitting not even slight deviations in temperature and time. Janovsky and Filandro propose a new test requiring one reagent, 1% *p*-aminophenol. A dark purplish color develops when ethylvanillin is present and a pale yellow or olive tint is given by vanillin. Mixtures containing less than 50% ethylvanillin do not give enough distinction to be of much practical value.

Chicks Used to Evaluate Growth-Stimulating Possibilities of New Antibiotics

pages 784 to 788

• Comparisons of several antibiotics in growth-stimulating experiments are reported by Gerard, Read, and Pensack. Average farm conditions were used in a series of seven chick feeding experiments and a swine study using bacitracin, erythromycin, *l*-ephenamine penicillin G, and the recently discovered antibiotic *B*. Erythromycin and feed supplements containing aureomycin and B_{12}, and penicillin-bacitracin stimulated swine growth and lowered feed costs. A method of evaluating new antibiotics using successive individual chick feeding experiments is presented.

Theory of Continuous Culture of Microorganisms with Calculations

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• The advantages of a method for continuous culture of a microorganism as compared with the batch culture are obvious from a production standpoint. A theoretical study of the possibilities is presented by Golle, with calculations useful in interpreting results and predicting operating conditions.