

TECHNICAL SECTION

JOURNAL OF **Agricultural and Food Chemistry**

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Foods Packaged in Paper Treated with Pyrethrins Protected from Insects

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• Packaging of cereals and other foods in paper is increasing, which means that the problem of protecting packaged foods against insect infestation is also increasing. Proper sealing, although an important factor in preventing insect entry, does not give protection against boring insects. Incho, Incho, and Matthews report on a study of the effectiveness of three pyrethrin formulations with piperonyl butoxide in protecting foods packaged in Kraft paper. Treated paper afforded protection against boring insects for two months to one year after treatment, depending on dosage and formulation.

Nutritional Data on Canned Foods; Protein Combinations Increase Efficiency

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• Further work on the nutritional value of canned foods, supported by the National Canners Association and the Can Manufacturers Institute, is reported by Teply, Derse, Krieger, and Elvehjem. In order to bring the program in line with geographical distribution and volume of production, they determined the vitamin B₆, folic acid, β -carotene, ascorbic acid, thiamine, riboflavin, and niacin content and the proximate composition of some canned products. • A study by Sure with the assistance of Easterling, Dowell, and Crudup suggests the desirability, for people of low income levels now using corn for their basic cereal food, to consume a greater proportion of rice to balance the protein deficiency of corn. Using rats, they found that when half the proteins in milled cornmeal was replaced with proteins in milled rice, body weight increased 236% and protein efficiency increased 165%. Similar relationships were found in studies with milled wheat.

Theory and Practice of Measuring Food Color; Calcium Pectinate Films Improved for Foods

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• Hand, Robinson, Wishnetsky, and Ransford present an evaluation of the theory and practice of measuring the color of foods. A knowledge of the principles underlying physical measurements as well as an understanding of subjective grading is necessary to interpret reflectance colors in grading foods. A simpler approach, for such items as tomato juice for example, is possible instead of the involved tristimulus system of color notation and this is discussed. • Interest in the use of metallic pectinates as edible coating agents in the food industry indicates the need for better filming and coating agents. Waller and Baker report on a study in which molecularly dehydrated sodium phosphates were used to sequester the calcium ions, thus making the pectinic acid soluble for casting, dipping, molding, and extruding and drying as a gel or film. In all the dehydrated phosphates studied an increase in temperature and decrease in pH caused an increase in the rate of reversion to orthophosphate. Calcium pectinate increased the rate of reversion to orthophosphate in all cases, except tetrasodium phosphate.

Penicillin, Polymyxin, Thiolutin Control Infection in Beer Fermentation

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• Danger of infection with other microorganisms is a problem in beer fermentation as well as all other microbiological processes. Strandkov and Bockelmann report on experiments with a number of antibiotics in controlling bacterial and secondary yeast contamination in the brewery. Polymyxin is reported outstanding in controlling Gram-negative bacterial infection of brewer's yeast and beer fermentation. Penicillin was the most effective in controlling Gram-positive lactic acid bacteria in finished beer; used with thiolutin for controlling secondary yeast growth, it protects against microbiological growth in finished beer.