

Dehydrated Meats and Processed Peanuts Are Chemically Changed Products

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• Indications that freeze-drying of raw steaks and chops may be feasible on a commercial basis are reported in the third paper from the ACS meeting symposium on dehydrated foods which began in the previous issue. Doty, Wang, and Auerbach surveyed the qualities of dehydrated meats prepared by techniques used commercially. Original studies investigated the basic histological and histochemical changes. Studies of techniques applied through the end of World War II indicated that only meats precooked, minced, and dehydrated were satisfactory; these lost certain qualities on processing and storage and had less-than-ideal rehydration characteristics. Dehydration under vacuum and in air showed changes which did not reverse on rehydration. Slices of raw meat frozen-dried could be rehydrated with almost complete return to the normal histological organization. • A review of the changes in the composition of edible peanuts during processing, by Hoffpauir, shows that the roasting process has definite modifying effects. Moisture and other volatile constituents are driven off. Proteins are denatured and react with sugar to give nonenzymatic browning. Sugars are caramelized and polysaccharides are degraded. Enzymes are inactivated and some heat-labile vitamins destroyed. The oil undergoes practically no change, but flows through the kernel, wetting the cellular structure.

Nitric Phosphates Made from Phosphate Rock with Nitric as Only Acid

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• Neither sulfuric nor phosphoric acid is needed for the manufacture of nitric phosphates by the process developed on a pilot plant scale by Nielsson and Yates. Phosphate rock was acidulated with nitric acid, potassium sulfate or another soluble sulfate was added, and the slurry was ammoniated, dried, and granulated. The product grade varied with the soluble sulfate added. Langbeinite and glaserite also were successfully used to fulfill sulfate requirements. Estimates indicate that the process is economically attractive.

N-Trichloromethylthio Compounds Evaluated as Fungicides

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• In work directed toward determining whether the trichloromethyl group is primarily responsible for fungicidal activity, Kittleson synthesized and evaluated 18 *N*-trichloromethylthio derivatives. All were active, leading to the conclusion that that group is the active portion of molecule. The properties of *N*-trichloromethylthiotetrahydrophthalimide, or captan, have been investigated most thoroughly among compounds of this class.

Amino Acid Contents of Vegetable Leaves Evaluated

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• A number of vegetable leaf meals and protein concentrates were analyzed for 10 amino acids by Kelley and Baum. No leaf meal was outstandingly high in any one amino acid, but all contained a nutritionally well-balanced mixture. The content of each leaf meal was approximately 25% lower than that of the corresponding concentrate. This was attributed to failure of the factor Kjeldahl nitrogen $\times 6.25$ to estimate correctly the protein in leaf meals.