

Canned Grapefruit Juice Changes on Storage

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- Studies of the chemical changes taking place in volatile water-soluble constituents of grapefruit juice were carried out by Kirschner, Miller, Rice, Keller, and Fox. While very little difference was found between freshly extracted and freshly canned juices, distinct changes were observed in canned juice which had been stored at room temperature for four years. Small amounts of acetic acid and two unsaturated acids were found in the freshly canned juice, along with a trace of furfural. The stored canned juice contained hydrogen sulfide and considerably increased volatile acids, methanol, and furfural.
- Kirschner and Miller, in examining the volatile oil constituents in fresh and canned grapefruit juices, found changes in stored canned juices the same as those in fresh canned products, but greater quantitatively. Limonene decreased while some other compounds, including furfural, increased.

No Growth Influence of Aureomycin-B₁₂ Found on Mice

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- No growth stimulating influence was found by Mirone on experiments with aureomycin hydrochloride with and without vitamin B₁₂ fed to mice on a diet containing 30% casein. Vitamin B₁₂ alone enhanced the growth of the male during the first five weeks of experimental diet. With both aureomycin and B₁₂ no effect was observed on body moisture, fat, and nitrogen of the female. Male body fat increased but body moisture and nitrogen decreased.

Pesticides Formulation Requires Understanding and Care

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- The publication of the paper on principles of formulation, by Gardner, completes presentation of the symposium on formulation of pesticides which took place under the auspices of the Division of Agricultural and Food Chemistry at the recent Los Angeles meeting of the AMERICAN CHEMICAL SOCIETY. Gardner, in his paper, points out that formulation is much more than a mere mixing of components. Fundamental properties must be known, field requirements determined, packaging and shelf-life problems must be solved, and extensive field tests done with care.

Nutrients in Soil and Contaminants in Air Affect Plants

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- Anderson and Jordan, having observed that boron increased nitrogen fixation by *Azotobacter chroococcum*, studied the matter further to observe that boron utilized by the azotobacter cell exerts a positive effect upon pigment production and coloration. High boron appears to inhibit pigment production in the presence of optimum copper. It is suggested that copper and boron may be related to undesirable pigmentation in foods and may be factors in growth of melanins.
- A search by Miller, Allmendinger, Johnson, and Polley, for inexpensive methods for detection of atmospheric fluoride led to gladiolus and lime-treated filter paper. A method is described for estimating areas where sufficient fluorides are in the air to increase fluoride content of forage used for cattle pasture.