

TECHNICAL SECTION

JOURNAL OF
**Agricultural
and Food
Chemistry**

- Biochemical Engineering
- Fermentation
- Food Processing
- Nutrition
- Pesticides
- Plant Nutrients and Regulators

PESTICIDES

Pesticides Toxicity. Toxicological information for the evaluation of hazards in making, handling, and using Dowfume EB-5, a fumigant used to control insects in stored grain, is provided by Rowe, Hollingsworth, and McCollister. With laboratory animals the LD_{50} was found to range from 0.28 to 0.78 gram per kg. Livestock fed freshly fumigated grain showed no adverse effect, although direct contact with the fumigant caused eye irritation but no lasting effect. Prolonged contact of the skin resulted in burn and possible absorption of toxic amounts.

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Insecticide Residues. Modifying the Alessandrini method of determining DDT residues for use in the field under primitive laboratory conditions is discussed by Amsden and Walbridge. The modification involves the substitution of an amine for alcoholic potassium hydroxide to produce an intense yellow color with the tetranitro derivative of DDT.

FOOD PROCESSING

Sugar Beet Evaluation. A report on a sampling technique, a method of measuring respiration, and preparation of diffusate for chemical analysis of sugar beets is presented by Stout. The method, useful in screening sugar beets for breeding new varieties, does not injure the beet for subsequent growth.

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Metabolism of Apples. Part of a broad study of the metabolic processes which persist in fruit between harvest and processing is recorded by Axelrod and Seegmiller. This section concerns the study of conversion of glucose to sucrose in isolated apple tissue with the aid of radioactive tracer techniques. When radioactive glucose is infiltrated into the apple tissue, radioactive sucrose is formed, with most of the radioactivity found in the glucose portion of the sucrose molecule.

NUTRITION

Feed Digestibility. Because of the importance of measuring the digestibility of forage in pasture research and the unsuitability of the "chromogen" method for forage low in chlorophyll derivatives, Smart, Jr., Matrone, and Smart present a modification of the "chromogen" method. They found that treatment of the samples with copper chloride and hydrochloric acid stabilized the chlorophyll and pheophytin pigments and eliminated others such as the carotenoids.

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