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tected contains from 0.0005 to 0.005% of the ester. Cf. *C.A.* **44**, 3632*a*. O. Johnson

Sweetening for canned fruit. Arvid M. Erickson (to Hawaiian Pineapple Co. Ltd.). U.S. 2,499,375, Mar. 7, 1950. A clear water-white sirup is prepd. by treating an aq. ext. of fruit, such as raisins, with lime and H_3PO_4 to remove acids and ash-forming materials that might detract from the sweetening powers of the sugars. This sirup is then used in suitable concn. in place of sucrose in canning fruits, such as pears and cherries, and in juices and permits the use of greener fruit for canning. O. J. *a*

Sodium-free flavoring compositions. Frank J. Cahn (to Louis Milani Foods, Inc.). U.S. 2,500,919, Mar. 21, 1950. A flavoring material is prepd. by mixing the amt. of finely divided K_2CO_3 or $KHCO_3$ required half to neutralize a given amt. of finely divided glutamic acid. This flavoring material may also be used as a base for dry soup concentrates. If the dry mixt. is to be canned, K_2CO_3 should be used. E. L. Sexton *b*

Pentosan and feed concentrates from cottonseed hulls. Henry E. Shiver (to Quaker Oats Co.). U.S. 2,500,435, Mar. 14, 1950. Hulls are ground so that approx. 50% will pass through a 50-60-mesh screen. The fine fraction contains approx. 2 times the fat content and 1.66 times the protein content of the original hulls. The concn. of palisade cells in the coarse fraction increases the pentosan content to approx. 1.5 times that in the original hulls. O. Johnson

Vitamin concentrate. Adolf Rosenberg. U.S. 2,501,409, Mar. 21, 1950. In prepg. a vitamin concentrate suitable for supplementation of animal feeds, 200 parts by wt. of liquid condensed molasses-distiller's solubles (I) was heated to approx. 200°F., and 16-24 parts by wt. of a gum or synthetic emulsifying agent was added. This mixt. was stirred until it obtained a jellylike consistency. This jelly was added to approx. 1200 parts by wt. of I, and the mixt. agitated for 4-6 hrs. Following the addn. of 600 parts by wt. of fish-liver oils, the mixt. was agitated for 12 hrs. The resulting liquid was strained and the filtrate homogenized. This emulsion may be frozen (−20°) and returned to the liquid state without damaging the emulsion. E. L. Sexton

13—CHEMICAL INDUSTRY AND MISCELLANEOUS INDUSTRIAL PRODUCTS

T. H. CHILTON

General report on the evolution of the chemical industry during the last century. Maire. *Mém. soc. ing. civils France* 101, Spec. III, 403-33(1948). M. Hartenheim

World trade prospects for 1955: Our American chemicals will have to fight for foreign markets. Robert S. Aries (R. S. Aries & Assoc., Brooklyn, N.Y.). *Chem. Eng.* 57, No. 2, 128-30(1950).—The fertilizer, plastics, and dyestuffs industries of Western Europe have regained their vigor and are expected to provide lively competition to American firms in the export markets. J. C. Tallman *d*

How Calco planned a plant for future expansion. Morgan M. Hoover. *Chem. Eng.* 57, No. 2, 134-5(1950).—Discussion of provisions for future expansion during design and construction of the new Willow Island, W. Va. plant of the American Cyanamid Co., Calco Chemical Division. J. C. Tallman *e*

Industry and the Chemical Corps. Anthony C. McAuliffe (U.S. Army, Washington, D.C.). *Armed Forces Chem. J.* 3, No. 8, 28-9(1950).—Industrial mobilization and procurement planning are discussed. L. W. G.

Making research effective. G. G. Oberfell (Phillips Petroleum Co., Bartlesville, Okla.). *Chem. Eng. News* 28, 1278-83(1950). E. J. C. *f*

Examination of the benzene market in America. P. P. Gardeniers. *Chem. Weekblad* 44, 95(1948).—At present with the high demand for steel there is just about sufficient by-product C_6H_6 available for the various chem. industries, but should the amt. of coke produced fall, as it may well do as a result of probable changes in steel processing, there is likely to be a severe shortage of C_6H_6 from coal tar, which will probably result in an increased price and an urge to manuf. more from petroleum. B. A. *g*

Prophylactic fluorination in a galvanic workshop. A. R. Khesina and V. M. Serebryakova (Moscow Med. Inst.). *Stomatologiya* 1949, No. 4, 28-9.—Partially beneficial results in prevention of dental caries with a NaF paste. N. Thon

Panel on epidemiology, including environmental and occupational cancer. W. C. Hueper, *et al.* (Natl. Cancer Inst., Bethesda, Md.). *Proc. Natl. Cancer Conf.* 1949, 244-58; cf. *C.A.* 43, 7575*g*.—The following forms of occupational cancer are discussed: bladder tumors from β-naphthylamine and benzidine; skin cancer from petroleum fractions, shale oil, arsenicals, and radiation; lung cancer from chromates, asbestos, and Ni carbonyl; and bone cancer from radium. The possibility is being investigated that cancer may be produced by bars contg. radium used to prevent accumulation of static electricity in textile and printing plants. Beryllium compds. are reported to have produced tumors in animals and pulmonary disease but thus far no tumors in man. Marion Horn Peskin *h*

Injuries following continued administration of cadmium: Preliminary study of a clinical and experimental study. Lars Friberg (Natl. Inst. of Public Health, Stockholm). *Arch. Ind. Hyg. Occupational Med.* 1, 458-66(1950).—Workmen exposed to Cd and Ni dust in an alkali storage battery plant developed anosmia, emphysema of the lungs, lowered working capacity, proteinuria, increased erythrocyte sedimentation rate, and impairment of renal function. Exptl. evidence indicates that Cd is responsible for the proteinuria and emphysema; although Ni possibly contributes to the emphysema. C. L. Campbell

Prophylaxis of dental caries in chemical industry. R. P. Sukhovol'skaya (Moscow Med. Inst.). *Stomatologiya* 1949, No. 4, 29-30.—Beneficial results of preventive treatment with a 75% NaF paste in plants producing HNO_3, SO_2, or handling Pb. N. Thon

Prevention of silicosis. D. Evans and W. Schweisheimer. *S. African Mining Eng. J.* 60, II, 807-9(1950).—The problem of pneumoconiosis in the wider sense is discussed and the status of diagnosis, treatment, and prevention compared between England, the United States, and South Africa. Prevention of silicosis should principally consist in removal of all harmful dust concns., i.e., with more than 15%-20% SiO_2 exceeding 5 million particles per cu. ft. of air. Inhaling Al for prevention and treatment of silicosis is considered very helpful. In treating the use of a nebulizer to introduce drugs into the respiratory tracts in form of a fine mist proved effective only in combination with a valve introducing the mist under pressure and doing the miner's breathing for him if the disease has progressed so much as to impair the elasticity of the lungs. M. Hartenheim

Packing incendiary bomb clusters. A container problem. Fred B. Shaw, Jr. (Army Chem. Center, Md.). *Armed Forces Chem. J.* 3, No. 8, 20-1, 40(1950).—The use of a moisture-proof drum and silica gel dehydrating agent materially reduced the moisture deterioration of Mg and incendiary-oil bombs. L. Wilson Greene

Properties and essential information for the safe handling and use of formaldehyde. Anon. *Mfg. Chemists' Assoc., Chem. Safety Data Sheet* SD-1, 13 pp.(1940). E. H.

Properties and essential information for the safe handling and use of paraformaldehyde. Anon. *Mfg. Chemists' Assoc., Chem. Safety Data Sheet* SD-6, 11 pp.(1950). E. H.

Armour's star. Ralph H. Potts (Armour & Co., Chicago, Ill.) and Gordon W. McBride. *Chem. Eng.* 57, 124-7, 172-5(1950).—Description and flowsheet of Armour's new plant at McCook, Ill., for chem production from fats, oils, and fatty acids. Principal products