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acids at elevated pressures and temps. below the b. p. The plant material and the acid are placed into the cooker, then air is pumped in. By subsequent heating the pressure rises still further.

Highly gelling pectin. Märwiler Essigfabrik Märstatten A.-G. Ger. 740,074, Aug. 26, 1943 (Cl. 53k. 1.02). A pectin-contg. material, e. g. apple residues, is treated with excess H_2O for 2-10 min. at a pH 3-4 and a temp. 93-100°. Without changing the H_2O the temp. is lowered to 60-80°, preferably 66-76°, and thus kept for 3-14 hrs.

Pudding starch from potato starch. Wirtschaftliche Vereinigung deutscher Stärke-Industrien. Ger. 739,632, Aug. 19, 1943 (Cl. 53k. 2.01). Potato starch with a moisture content of 50% is treated at 55-57° and a pH of 5.5-6.6 until the product upon boiling with H_2O yields a gelatinized, pudding-like mass. In Ger. 739,716, potato

starch is treated with alkalis until, upon the removal of the alkalis and neutralizing or acidifying the product or by oxidation, it yields a paste that is readily cut.

Fat rich in vitamin D from cacao shells. Heinrich Fincke (to Gebrüder Stollwerk A.-G.). Ger. 739,653, Aug. 19, 1943 (Cl. 30k. 2.20). Cacao beans or plant germs are added to the shells to bring the fat content up to 20-30%. The mixt. is finely ground, warmed slightly and pressed.

Feed from potato tops. Kurt Schwabe and Erich Lehmann (to Franz H. Rauch). Ger. 739,926, Aug. 19, 1943 (Cl. 53g. 4.01). Potato tops or the residue after cellulose extn. from potato tops are cleaned then mildly boiled for 1/2-1 hr. with 1-2% of an org. or inorg. acid. The cooking is at ordinary or raised pressure. The product is washed and dried.

13—CHEMICAL INDUSTRY AND MISCELLANEOUS INDUSTRIAL PRODUCTS

T. H. CHILTON

[Please note that abstracts dealing with synthetic resins and plastics, formerly classified in this section, are now put in a new section (No. 31). Other changes in classification policy affecting Section 13 are the transfer of abstracts on wetting agents, foaming agents, cleansing compositions and most types of emulsifying and polishing agents to Section 27 under "Detergents" and of abstracts on insulators, both electrical and thermal, to Section 20 under "Building Materials."—EDITOR.]

The investigation of toxic hazards. M. W. Goldblatt. *Brit. J. Ind. Med.* 1, 20-30(1944).—Among the numerous toxic chemicals discussed are CO , H_2S , NH_3 , lime, HF , CS_2 , ethylene chlorohydrin, benzene, TNT, tetryl, MeI , methyl mercuric iodide, methylmercuric nitrate, other Hg compds., *o*-toluidine, $NaNO_2$, metallic mercury, Pb chromate, Pb oxides, Pb sulfate, dichloroethane, trichloroethylene, other chlorinated hydrocarbons, and oxalic acid. An instance is reported in which acute hemorrhagic cystitis, developing in workers manufg. a chlorinated aromatic amine [not specified], was prevented by modification of the mol. structure of the product in a manner detd. experimentally by G. Danger of potentially hazardous residual materials is illustrated by a fatality from H_2S evolved when a waste acid stream met a residue contg. inorg. sulfides. Technique of investigation of industrial hazards by literature search, prediction from phys. and chem. properties and exptl. and clin. study are described.

The danger of Pb poisoning in the graphite industry. Heinz Lange. *Med. Welt* 17, 373-6(1943); *Chem. Zentr.* 1943, II, 1029.—A discussion.

The lethal action of benzyl benzoate, dimethylthianthrene (Mitigal) and tetraethylthiuram monosulfide (Tetmos) on the scabies-producing mites, *Notoedres* Sp. and *Sarcoptes scabiei* var. *hominis*, when tested in vitro. R. M. Gordon and K. Unsworth. *Ann. Trop. Med.* 37, 195-9(1943).—These substances in 5% soln. all proved lethal to mites belonging to the genus *Notoedres* and to *Sarcoptes scabiei* var. *hominis*. The latter proved more resistant to both benzyl benzoate and Tetmos than the former. Tetmos in 5% soln. destroyed both *Notoedres* and *Sarcoptes* more rapidly than did benzyl benzoate. With *Notoedres* of some 80 mites tested only 6% survived exposure 10 hrs. to Tetmos whereas 90% survived a similar exposure to benzyl benzoate. Mitigal proved superior to benzyl benzoate but inferior to Tetmos in lethal action against *Notoedres*.

Dermatitis due to vinylcarbazole. Irving R. Tabershaw and John B. Skinner. *J. Ind. Hygiene Toxicol.* 26, 313-15(1944).—Case reports are given, and methods of control are described.

Chronic CCl_4 intoxication. Alice Stewart and L. J. Witts. *Brit. J. Ind. Med.* 1, 11-19(1944).—In a poorly ventilated plant where an aniline deriv. was chlorinated in CCl_4 under conditions leading to heavy-atm. contamination with the solvent (concn. not detd.), over half the

workers during 2.5 years developed symptoms of CCl_4 poisoning sufficiently severe to necessitate discharge or transfer to other employment. Examin. of 78 employees who were being, or had been, exposed to the solvent revealed gastrointestinal disorders and phys. and mental lassitude as the commonest complaints. Gastric hypersecretion, hypermotility with irritability, and irregular contraction throughout the alimentary tract were exhibited frequently by those subjects undergoing fractional gastric analysis, radiography, and gastroscopy. Blood urea, serum bilirubin and phosphatase, and plasma proteins, fat, fatty acids and cholesterol were normal, and the Takata-Ara reaction was consistently neg. Damage to liver or kidneys was rare. The symptoms of CCl_4 poisoning usually disappeared in a few days or weeks after removal from exposure, but disturbances in the alimentary pattern sometimes persisted several months.

Experimental asbestosis: pathognomonic value of asbestos bodies. M. de Giroux. *Laval Med.* 8, 239-50 (1943).—Expts. w. animals indicate that asbestos bodies form only after intense tissue reaction and with an appreciable deposit of iron furnished by the hemoglobin. The presence of asbestos bodies in the sputum or in fluid obtained by pulmonary puncture indicates pulmonary asbestosis but not the degree of pulmonary sclerosis since the degree of fibrosis may vary.

Increase of activity by wet dispersion of asbestos. N. N. Serb-Serbina and K. N. Shumikhina. *J. Applied Chem. (U. S. S. R.)* 16, 273-9(1943) (French summary).—The authors found that it is possible to achieve the increase of the swelling effect of asbestos by addn. of alk. electrolytes and univalent cations of chloride salts in small concns. Alkalies and alk. carbonates increase the dispersion coeff. during wet treatment, while multivalent cations act in a dehydrating manner and tend to decrease the swelling and dispersion effects. However, soaps, Na silicate and colloidal substances decrease the swelling effect.

Testing agents for protection against, and for combating, termites. Karl Gösswald. *Anz. Schädlingkunde* 19, 13-21, 30-4(1943); *Chem. Zentr.* 1943, II, 1'25.—Living and dead plants, plant-fiber products, and animal products are subject to damage from termites. Damage can be avoided by the use of materials that by reason of their chem. compn. or phys. structure are resistant to termites, by the use of repellents, or by direct destruction of the pests by poisons, by hot dry air, or by irradiation. A method of testing these agents is described, in which *Calotermes flavicollis* in different stages of development is used as a test organism.

Quantitative analysis of the olfactory response in animals. Gerolf Steiner. *Naturwissenschaften* 30, 647-8 (1942); *Chem. Zentr.* 1943, I, 2529.—The attraction of the flesh fly by solns. of ethylamine of various concns. was studied. The capture quotient for the males and females was not the same. The difference apparently is not due