

days. These studies indicate that a complex dynamic mechanism exists associating dietary fat with mitochondrial structural-functional changes and energetic efficiency in the growing chick.

INTRALIPID CLEARANCE AND LIPOPROTEIN PATTERN IN MEN WITH ADVANCED ALCOHOLIC LIVER CIRRHOSIS. S. Rössner, C. Johansson, G. Walldius, and A. Aly (Dept. of Internal Medicine and King Gustaf V Research Inst., Karolinska Hospital, Stockholm, Sweden) *Amer. J. Clin. Nutr.* 32(10),2022-6 (1979). Twelve male patients with advanced alcoholic cirrhosis of the liver were found to have markedly low serum lipid and lipoprotein concentrations. Serum triglyceride and cholesterol concentrations were about 50% of matched control values. The very low density lipoprotein-triglyceride concentration was only one-third of control values and the cholesterol concentrations in very low density and low density lipoproteins were far below control values. The mean high density lipoprotein cholesterol concentration was not significantly decreased, but in three of 12 patients extremely low values were found. These findings may reflect a failure of lipoprotein synthesis secondary to a bad nutritional state and metabolic disturbances in this advanced stage of liver cirrhosis. By means of the intravenous fat tolerance test with Intralipid it could be shown that substantial amounts of triglycerides could be cleared from the plasma in these patients. However, studies on the long-term Intralipid clearance capacity have to be performed before any general recommendations about the inclusion of fat emulsions in parenteral nutrition of these patients can be made.

LIPID AND STEROID HYDROPEROXIDES AS SUBSTRATES FOR THE NON-SELENIUM-DEPENDENT GLUTATHIONE PEROXIDASE. M.R. Shreve, P.G. Morrissey and P.J. O'Brien (Dept. of Biochem., Memorial Univ. of Newfoundland, St. John's Newfoundland A1B 3X9, Canada) *Biochem. J.* 177(2),761-3 (1979). The reduction of linoleic acid hydroperoxide catalyzed by rat liver cytosol was previously shown to be catalyzed by a selenium-dependent glutathione peroxidase. In contrast, the enzyme responsible in guinea-pig liver cytosol is not selenium-dependent and appears to be a glutathione transferase.

EARLY EFFECTS OF VITAMIN A TOXICITY ON HEPATIC GLYCOLYSIS IN RAT. V.N. Singh, M. Singh and K.N. Dileepan (Dept. of Biochem., Vallabhbai Patel Chest Inst., Univ. of Delhi, Delhi, India) *J. Nutr.* 108(12),1959-62 (1979). Vitamin A toxicity, caused by oral administration of 30,000 IU of vitamin A (retinyl palmitate) to young rats (70 to 90 g) once daily for 2 days, increased the levels of lipids, glycogen, and citrate in the liver. Furthermore, hypervitaminosis A decreased the activities of two key hepatic glycolytic enzymes, phosphofructokinase, and pyruvate kinase, without affecting those of hexokinase and glucokinase. It is suggested, therefore, that in addition to the increased activities of key gluconeogenic enzymes, reported earlier, a marked decrease in the activities of phosphofructokinase and pyruvate kinase and elevated level of citrate in the liver could account for the enhanced gluconeogenesis in hypervitaminosis A.

EFFECT OF CLOFIBRATE ON CHOLESTEROL AND DNA SYNTHESIS IN RAT VENTRAL PROSTATE. A.K. Singhal, D.R. Brill, and C.P. Schaffner (Waksman Inst. of Microbiol., Rutgers-The State Univ., New Brunswick, NJ) *Proc. Soc. Exp. Biol. Med.* 160(4), 405-9 (1979). Clofibrate, a known inhibitor of cholesterol synthesis in the liver, was found effective in inhibiting cholesterol synthesis in the ventral prostate of rats after 2,3,4, and 10 weeks of clofibrate treatment by oral route. Blockage of cholesterol synthesis in prostate also inhibited the DNA synthesis in the ventral prostate. When clofibrate treated castrated rats were injected with testosterone, the prostate weight, the content and the synthesis of cholesterol and DNA were not restored to levels equal to those seen in control rats. Clofibrate feeding to normal rats for 10 weeks also caused histopathological changes in the ventral prostate of rats.

Drying oils and paints

TRIGLYCERIDE AND FREE FATTY ACID COMPOSITIONS OF LINSEED OIL IN WOOD. M.H. Schneider. *J. Coatings Technol.* 51(657),61-3 (1979). Linseed oil was allowed to move into wood and the free fatty acid content of the oil was measured at various distances of travel. The amount of free fatty acid in the oil increased as distance of travel increased. This may have implications for many oil-type coatings applied to wood.

POLYACRYLATE-MODIFIED WATER-BORNE ALKYDS. E. Levine and E.J. Kuzma. *J. Coatings Technol.* 51(657),35-48 (1979). A process for the improvement of color, drying rate, early water resistance and long-term flexibility of water-borne air-drying alkyds is described.

THREE-PHASE EMULSIONS. S. Friberg. *J. Soc. Cosmet. Chem.* 30,309-19 (1979). In many stable and commercially important emulsions the emulsifier, water and oil molecules form regular structures of multimolecular layers. These layers actually are distinct phase, that can exist independently after separation from the emulsion by centrifugation. The structure of this separate phase may be determined by X-ray diffraction, optical and electron microscopy. Discussed are the features and the structure of these three-phase emulsions, describing the means of their identification.

EMULSION PAINTS IN BLUANDING. O.C. Vorster. *J. Oil Col. Chem. Assoc.* 67,299-302 (1979). Paper deals with the performance of emulsion paints on timber, cementitious and metallic surfaces. Results are based on exposures at five exposure stations representing five climatic regions.

EPOXY/POLYESTER POWDER COATINGS—ECONOMIC AND TECHNICAL CONSIDERATIONS IN THEIR USAGE. J.E. Sreeves and L. Whitfield. *J. Oil Col. Chem. Assoc.* 62,293-8 (1979). The possible cross-linking agents for both hydroxyl and carboxyl terminated polyesters are summarized, and the economic and technical reasons for the present trend towards epoxy/polyester systems are discussed. The usefulness of zinc oxide as a catalyst for the epoxy/carboxyl reaction is stressed, and the effect of certain extenders on the film properties of powder coatings is described.

FATS AS SOURCE FOR CATIONIC SURFACTANTS. M.K. Schwitzer. *Chem. Ind.* 1979, 11-5. The production of cationic surfactants from fats, and their uses, including use in paints and pigments, are reviewed. (World Surface Coatings Abs. No. 445)

USE OF CASTOR OIL PYROLYSIS RESIDUES FOR MAKING ALKYD PAINTS. I.I. Yukel'son and T.R. Butenko. *Lakokras. Mat.* 1978,(4),67-8. Useful film-forming resins were obtained by condensation of mixed fatty acids (residues from the production of sebacic acid by pyrolysis of castor oil) with glycerol, phthalic anhydride and optionally rosin. (World Surface Coatings Abs. No. 446)

EPOXY ESTERS CONTAINING SYNTHETIC FATTY ACIDS. A.P. Lysenkoy, V.V. Zhebrovskii and G.A. Larchenko. *Lakokras. Mat.* 1978,(4),10-11. With the object of economising on the use of vegetable oils, synthetic (petrochemical) fatty acids have been tested as components of polyesters for paints. Epoxy resin was reacted with linseed oil fatty acid or its 1:1 mixture with 10-13 C or 10-16 C synthetic fatty acid, and the products were used in a typical primer formulation. The presence of 50% synthetic acid in the resin formulation had no deleterious effect on paint property and its economic effect is likewise advantageous. (World Surface Coatings Abs. No. 446)

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