Biophys. Acta **137**, 435–45 (1967). Livers from normal rats, from rats treated 48 hours before use with alloxan, and from alloxan-diabetic animals treated with insulin, were perfused *in vitro* with a medium containing palmitic acid-1-^{14}C. It was observed under our experimental conditions that hepatic release of triglyceride, phospholipid, and cholesterol into the $d < 1.020$ lipoprotein was depressed by alloxan diabetes and was restored to normal by pretreatment of the animal with insulin. During these perfusions of livers from diabetic animals with small loads of palmitic acid, hepatic triglyceride concentration was diminished, whereas it appeared to be unchanged in livers from normal rats. Incorporation of ^{14}C into triglycerides and phospholipids of the $d < 1.020$ lipoprotein was depressed by alloxan diabetes, perhaps, in part, a result of decreased release of these lipids into the lipoprotein. The rate of hepatic biosynthesis of phospholipid also appears to be inhibited in alloxan diabetes since the incorporation of ^{14}C and the specific activity of liver phospholipid was depressed. Although the incorporation of ^{14}C into hepatic triglyceride did not appear to be depressed in these experiments as a result of the alloxan diabetes, we can not say that rates of esterification of non-esterified fatty acid to triglyceride were normal; this reservation is necessary since these data were obtained at the termination of the perfusion experiment during which time the hepatic concentration of triglyceride was declining, fatty acid was being oxidized and triglyceride was not being released at normal rates.

INCORPORATION OF GLUCOSE-6-^{14}C AND PALMITIC ACID-9,10-^{3}H IN VITRO INTO LIPIDS OF ADIPOSE TISSUE FROM ESSENTIAL FATTY ACID-DEFICIENT RATS. A. Solyom, E. Muhlbachova and Lina Puglisi (Inst. of Pharmacology, Univ. of Milan, Milan, Italy). *Biochim. Biophys. Acta* **137**, 427–34 (1967). The simultaneous incorporation of labelled glucose and palmitic acid into lipids has been investigated *in vitro* in epididymal fat pads of rats fed essential fatty acid-deficient diet, in order to obtain information on possible metabolic differences brought about by essential fatty acid-deficiency in adipose tissue. It has been found that the incorporation of both precursors, but especially of glucose, is greater into adipose tissue lipids (mostly triglycerides) in rats fed essential fatty acid-deficient diet than in controls, indicating a greater triglyceride synthesis in these animals. Lipid synthesis in the adipose tissue of essential fatty acid-deficient animals, however, does not seem to differ qualitatively from that of controls. The distribution of radioactivity among the lipid components suggests that no change in the metabolic utilization of essential fatty acids for the synthesis of neutral lipids occurs. Also the incorporation of palmitic acid and glucose into glycerides is similarly affected in control and essential fatty acid-deficient animals during fasting or nicotinic acid or theophylline treatment.

THE STRUCTURE AND ABUNDANCE OF RAT TISSUE CARDIOLIPINS. S. Courtade, G. V. Marinetti and E. Stotz (Biochem. Dept., Univ. of Rochester School of Med., Rochester, N. Y.). *Biochim. Biophys. Acta* **137**, 121–134 (1967). Cardiolipins of rat tissues were isolated by column chromatography and analyzed. The P content ranged from 2.61% to 3.64%. The ester:P ratio varied from 1.63 to 2.09, and the glycerol:P ratios varied from 1.34 to 1.68. The fatty acid spectrum of the tissue cardiolipins showed some, like heart, kidney and liver to be highly unsaturated and others like brain, lung and testis to be highly saturated. Analysis of the fatty acids released by phospholipase A demonstrated that certain fatty acids are preferentially β-linked, but on the whole, the fatty acid distribution is much more random than that of other phospholipids, like the lecithins. All the rat tissue cardiolipins are degraded by hot acetic acid to yield diglycerides, very small amounts of monoglycerides, and other P-containing products. However, only with rat-liver cardiolipin, beef-heart cardiolipin, and a synthetic cardiolipin are appreciable amounts of water-soluble P released. On treatment with sodium methoxide at 0C all rat tissue cardiolipins gave rise to 4-6-lyso-derivatives resulting from the sequential loss of one or more fatty acids. All cardiolipins are eventually completely degraded to fatty acid methyl esters, a water-soluble P compound and smaller amounts of other products including free fatty acids and vitamin A. In the case of rat-liver cardiolipin, alkaline hydrolysis yields vitamin A but not in stoichiometric amount.

HYDROLYSIS OF PHOSPHOLIPIDS AND GLYCERIDES BY RAT-LIVER PREPARATIONS. M. Waite and L. L. M. van Deenen (Dept. of Biochem., Lab. of Org. Chem., The State Univ., Utrecht, The Netherlands). *Biochim. Biophys. Acta* **137**, 498–517 (1967).

(Continued on page 524A)

• *New Literature*

BECKMAN INSTRUMENTS, INC., has released bulletin 7119, dealing with a complete ultraviolet-infrared "spectroscopy laboratory" in one compact unit. The unit includes Beckman's DB Ultraviolet Spectrophotometer and the Microspec Infrared Spectrophotometer with 7-speed recorder. (Technical Information Section, Scientific Instruments Division, 2500 Harbor Blvd., Fullerton, Calif. 92634.)

"Health Aspects of Castor Bean Dust" is a part of the Environmental Health Series, established to report the results of scientific and engineering studies of man's environment. Included are reviews of Agricultural and Commercial Aspects, Toxicity and Allergenicity, Occupational Illness, Community Illness and Control Measures. (Request PHS Publication No. 999-AP-36, from US Department of Health, Education and Welfare, Public Health Service, Bureau of Disease Presentional and Environmental Control, Cincinnati, Ohio 45202.

A new technical bulletin on a preset batch counter with start-stop controls for use with flowmeters of flow measuring devices has been prepared by BROOKS INSTRUMENTS DIVISION of Emerson Electric Co. Designated the Brooks Model 4801 Batch counter, this instrument has a maximum pulse rate of 600 counts/minute. (Bulletin DS-4801, Brooks Instrument Division, Emerson Electric Co., Hatfield, Pa., 19440.)

LACHAT CHEMICALS INCORPORATED has expanded their listing of pure chemicals, laboratory aids and testing services. Their Catalog No. 7 lists chemicals alphabetically, and again, by class of compound, usually according to ascending carbon content. Facilities for new gas chromatography analyses and other analytical services and laboratory aids, are shown following the alphabetical listing. Cross-indexing of compounds by the most commonly used synonyms is continued. (20200 Ashland Ave., Chicago Heights, Ill. 60411.)

DURKEE FAMOUS FOODS has prepared a guide to bulk handling of shortening and oils, from the planning of such facilities to their maintenance. An additional brochure details the technical and performance characteristics of high stability oils produced through Durkee's new Fractional Crystallization process. A new product sheet outlines the applications, advantages and other details of Durkee's Satina coating butter, which is designed specifically for use in pastel coatings. (Durkee Industrial Foods Division, 2333 Logan Blvd., Chicago, Ill. 60647.)

ALDRICH CHEMICAL COMPANY, INC., has published its most comprehensive catalog, adding about 1,500 new listings for a total of almost 9,000 different chemicals. These chemicals are in stock and available for immediate shipment. The new listings include chemicals listed through KARDINDEX SET No. 105, dated September 20, 1966. (Aldrich Chemical Company, Inc., 2371 N. 30th St., Milwaukee, Wis. 53210.)

VARIAN ANALYTICAL INSTRUMENT DIVISION is offering a new mass spectrometer/gas chromatograph interface. The V-5500 MS/GC Accessory transfers in real time, organic materials in gas chromatographic effluents from the GC flow stream to the source of a mass spectrometer while at the same time preventing any appreciable flow of carrier gas into the mass spectrometer. (611 Hansen Way, Palo Alto, Calif. 94303.)