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Liquid vehicle compatible with skin and sebum

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acids were partially degraded to acetate. Ceramide and sphingomyelin showed relatively high activities, and the fatty acids of these lipids were labeled primarily in the carboxyl group. This suggests that ceramide is formed directly from cerebroside via a galactosidase, and that ceramide is converted to free fatty acids as well as sphingomyelin. Little activity was found in the hydroxy cerebrosides and sulfatides, suggesting that neither of the injected lipids is directly converted to these glycolipids. Ester-linked lignocerate was found to occur naturally in brain.

FATTY ACID COMPOSITION OF HUMAN BRAIN SPHINGOMYELINS: NORMAL VARIATION WITH AGE AND CHANGES DURING MYELIN DISORDERS. S. Stallberg-Stenhagen and L. Svennerholm (Inst. of Med. Biochem., Univ. of Gothenburg, Gothenburg, Sweden). *J. Lipid Res.* 6, 146-155 (1965). Sphingomyelins have been isolated in almost quantitative yield from normal and pathological human nervous tissues, and their fatty acid compositions determined by gas-liquid chromatography. In normal frontal lobe the proportion of stearic acid (18:0) decreases with increasing age from about 80% in the newborn to about 40% in the adult, whereas the C_{22} - C_{26} acids increase from about 10 to about 50%. In malformations of the nervous system the content of C_{22} - C_{26} acids was much smaller than in normal brains of the same age. In normal cortex 18:0 constitutes at least two-thirds of the sphingomyelin fatty acids at all ages. In normal white matter from adults C_{22} - C_{26} acids represent two-thirds of the acids present. We conclude that sphingomyelin of cytoplasm and that from myelin sheath show striking differences in the chain-lengths of their fatty acids. In patients who had

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• *New Products*

WATERS ASSOCIATES, INC., Framingham, Mass., has introduced the Differential Refractometer Column Monitor, which is unique in that it is sensitive to changes in refractive index to 10^{-7} and yet is portable, mounted in a small unitized case.

PRO-TECH, INC., Springfield, Pa., has available a new portable battery-operated pH unit that provides continuous recording. An all solid-state electronic circuit has been developed which allows stable calibration.

DISTILLATIONS PRODUCTS INDUSTRIES, Rochester, N. Y., Division of Eastman Kodak Company, has developed the Eastman Chromagram Sheet, a precoated, flexible sheet that does away with the complications associated with the conventional coating of plates.

CENTRICO, INC., Englewood, N. J., distributor of Westfalia centrifuges, has designed Model OSM-15007 for high capacity separation of soapstock from neutralized vegetable oil and water washing and degumming of vegetable oil.

PERKIN-ELMER CORPORATION, Norwalk, Conn., offers Model 450 Spectrophotometer, which provides a scan range of 165 millimicrons in the ultraviolet region to 2700 millimicrons in the new infrared.

AMERICAN INSTRUMENT COMPANY, INC., Silver Spring, Md., has developed the Accumelt, a new melting and boiling point apparatus which performs both determinations in less than one minute.

SELAS CORPORATION OF AMERICA, Dresher, Pa., offers The Flotronics Metal Membrane Filter, a pure silver membrane of uniform porosity, in a kit containing 100 filters of selected porosity grades.

died from dysmyelinating and demyelinating diseases the deviation from the normal pattern was much more pronounced in cerebral white matter than in total brain. Sphingomyelins of spinal medulla have a fatty acid pattern similar to that of adult brain but contain relatively higher amounts of 18:0 and 24:1. Sphingomyelins of peripheral nerve have a distinctly different fatty acid pattern with much less 18:0 than in cerebral white matter.

SYNTHESIS OF RACEMIC 1,2-DIOLEIN. L. Krabich and B. Bergstrom (Dept. of Physiol. Chem., Univ. of Lund, Lund, Sweden). *J. Lipid Res.* 6, 156-157 (1965). 1,2-Diolein has been synthesized by protecting the 3-position of glycerol during acylation and by means of the pyranil ether linkage. This linkage is easily broken under conditions leading to very limited isomerization of the diglyceride.

METABOLISM IN VITRO OF PALMITIC AND LINOLEIC ACID IN THE HEART AND DIAPHRAGM OF ESSENTIAL FATTY ACID-DEFICIENT RATS. O. Stein and V. Stein (Hebrew Univ.-Hadassah Med. Schl., Dept. Med. "B" Hadassah Univ. Hosp., Jerusalem, Israel). *Biochim. Biophys. Acta* 84, 621-635 (1964). Rats kept for 75-90 days on an essential fatty acid-deficient diet showed a marked fall in linoleic acid content and rise in the trienoic acid/tetraenoic acid ratio in heart as well as in diaphragm. Electron microscopic study of myocardium showed enlarged mitochondria with marked disorganization of cristae and swelling. Neutral lipid and phospholipid content of heart and diaphragm was not different from that of controls supplemented with 4% soyabean oil. Rat hearts were perfused and hemidiaphragms were incubated with a medium containing palmitate-1- C^{14} or linoleic-1- C^{14} acids. During 20 min of perfusion both fatty acids were oxidized to CO_2 to a similar extent. The fatty acid composition of the medium affected the mode and rate of incorporation of individual fatty acids in heart as well as in diaphragm. In the presence of an equimolar mixture of palmitic and linoleic acid, more linoleic acid was incorporated into the phospholipids and more palmitic into neutral lipids, than when each fatty acid was the only substrate. In the essential fatty acid-deficient rats the specific activity of the phospholipids in heart as well as in diaphragm was higher