

• *New Literature*

Berlox, beryllium oxide, laboratory ware are described in Product Bulletin 600 now available from NATIONAL BERYLLIA CORPORATION of Haskell, New Jersey. Berlox laboratory products are ceramic crucibles, trays, tubes, thermocouple insulators and custom formed units constructed of high-purity beryllia (BeO), an exceptionally chemically inert material which has high resistance to chemical attack. Typical exceptional thermal properties and performance is the heating of materials in Berlox crucibles at temperatures as high as 2000 C, which allows special applications as heating with R_f sources in high purity atmospheres and generally for high purity chemical processing of corrosive materials.

UNITED SENSOR & CONTROL CORP., Watertown, Mass., announces a new color brochure featuring a wide selection of standard and special purpose precision probes used for measuring temperature, total and static pressure, velocity and flow direction of fluids, gases and liquids. Offerings include: pitot static, kiel, temperature, 2 and 3 dimensional directional, boundary layer, gas sampling, boost venturi, conical; thermocouples; pressure and temperature rakes; manual traverse units and accessories.

The new 1969 ANALABS catalog lists 5000 high quality organic chemicals, 1000 pure lipid research standards and 2000 chemicals and accessories for gas chromatography. A free copy may be obtained from: Analabs, Inc., 80 Republic Drive, North Haven, Conn. 06473.

• *Referee Applications . . .*

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Please write to Edward R. Hahn, Chairman of the Examination Board, P.O. Box 1177, Columbia, S.C. 29202

Melba V. Rodgers of Texas Testing Laboratories, Inc., P.O. Box 1299, Lubbock, Texas 79408 has applied for a Referee Certificate on Cottonseed, Soybeans, Oil Cake and Meal, Protein Concentrates, Cottonseed Oil, Soybean Oil and other Fatty Oils. Interested parties wishing to comment on this certification should communicate with the Chairman of the Examination Board. Please write to Edward R. Hahn, Chairman of the Examination Board, P.O. Box 1177, Columbia, S.C. 29202

Harley F. Shofner of Texas Testing Laboratories, Inc., P.O. Box 1299, Lubbock, Texas 79408 has applied for a Referee Certificate on Cottonseed, Soybeans, Oil Cake and Meal, Protein Concentrates, Cottonseed Oil, Soybean Oil and other Fatty Oils. Interested parties wishing to comment on this certification should communicate with the Chairman of the Examination Board. Please write to Edward R. Hahn, Chairman of the Examination Board, P.O. Box 1177, Columbia, S.C. 29202

James K. Sikes of Plains Laboratory, P.O. Box 1590, Lubbock, Texas 79408 has applied for a Referee Certificate on Cottonseed, Soybeans, Oil Cake and Meal, Protein Concentrates. Interested parties wishing to comment on this certification should communicate with the Chairman of the Examination Board. Please write to Edward R. Hahn, Chairman of the Examination Board, P.O. Box 1177, Columbia, S.C. 29202

Donald C. Strathdee of Industrial Laboratories, P.O. Box 845, Clarksdale, Miss. 38614 has applied for a Referee Certificate on Oil Cake and Meal, Protein Concentrates. Interested parties wishing to comment on this certification should communicate with the Chairman of the Examination Board. Please write to Edward R. Hahn, Chairman of the Examination Board, P.O. Box 1177, Columbia, S.C. 29202

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generated in the mitochondria (by pyruvate decarboxylation) and in the cytosol (by the citrate cleavage enzyme). Epididymal fat pad segments were incubated with glucose-6- 14 C-6-T, a precursor of mitochondrial acetyl CoA, and glutamate-5- 14 C-4-T, a precursor of extramitochondrial acetyl CoA. In this manner the tritium loss in the conversion of both extra- and intramitochondrial acetyl CoA to fatty acids can be calculated. It was found that conversion of extramitochondrial acetyl CoA to fatty acids involved a 20% lower loss of tritium than in the conversion of intramitochondrial acetyl CoA. The additional loss of tritium in the latter pathway corresponds closely to the loss of tritium in the conversion of T-acetyl CoA to T-citrate in the citrate synthase reaction, suggesting that citrate is involved in the transfer of the acetyl group of acetyl CoA.

FAT INTAKE AND UNSATURATED FATTY ACIDS IN INFANTS' DIETS. M. Finzi. *Industrie Alimentari* 7(11), 101-7 (1968). A review is made of current knowledge and theories concerning infants' diets, with special reference to maternal and artificial milk.

THE SYNTHESIS OF 25-HYDROXYCHOLECALCIFEROL. A BIOLOGICALLY ACTIVE METABOLITE OF VITAMIN D₃. J. W. Blunt and H. F. DeLuca (Dept. of Biochem., Univ. of Wis., Madison, Wis. 53706). *Biochemistry* 8, 671-75 (1969). Cholesta-5,7-diene-3 β ,25-diol has been synthesized by two methods and then converted into 25-hydroxycholecalciferol, which was identical in all respects with the biologically active metabolite of vitamin D₃ previously isolated from porcine plasma.

SYNTHESIS AND DISTRIBUTION OF CHOLESTEROL, AND THE EFFECT OF DIET, AT THE LIVER ENDOPLASMIC RETICULUM AND PLASMA MEMBRANES FROM LEAN OR OBESE RATS. L. C. Fillios, O. Yokono, A. Pronczuk, I. Gobe, T. Satoh and K. Kobayakawa (Boston Univ. Schools of Med. and Grad. Dentistry, and Univ. Hosp., Boston, Mass.). *J. Nutr.* 98, 105-112 (1969). To determine the significance of changes in cholesterol concentrations in various membranous components of liver cells, lean as well as genetically obese rats were fed diets containing cholesterol. Cholesterol was found to accumulate to a greater extent in the smooth vesicles (versus rough vesicles) of the endoplasmic reticulum, and the highest concentrations were in the plasma membrane fraction. These increases included a significant proportion of esterified cholesterol. Using 14 C-mevalonate *in vivo* in rats fed a cholesterol-free diet, it was concluded (from the total activities of the isolated labeled cholesterol up to 180 minutes) that in time the total activity of newly synthesized cholesterol shifts from rough vesicles to smooth vesicles and finally to the plasma membrane fraction. However, 14 C-cholesterol incorporation *in vivo* revealed a pattern of incorporation that was similar for smooth and rough vesicles in rats fed diets with or without cholesterol. Total activity of the rough was always higher. From the analytical data, esterification perhaps takes place at the level of the smooth vesicles (or cholesterol ester accumulation hastens the transition of rough to smooth). Polysomal profile analyses indicated that cholesterol feeding resulted in a relative decrease in larger aggregates in obese rats.

HYPOCHOLESTEROLEMIC ACTIVITY OF N-(FERROCENYLMETHYL) PIPERIDINE. J. W. Barnhart, J. A. Sefranka, and D. E. Bublitz (Human Health Res. and Dev. Lab., The Dow Chem. Co., Zionsville, Ind. 46077). *Proc. Soc. Exp. Biol. Med.* 130, 1161-64 (1969). A ferrocene derivative, N-(ferrocenylmethyl) piperidine possesses marked hypocholesterolemic activity. This activity appears to be due to the ability of this agent to alter the metabolism of 7-dehydrocholesterol. Abnormal quantities of this sterol were found in serum and liver of animals treated with this chemical. In addition, the ferrocene derivative is an effective inhibitor of the reduction of 7-dehydrocholesterol *in vitro*.

ACUTE CHANGES IN LIVER LIPIDS DURING MYOCARDIAL INFARCTION INDUCED BY ISOPROTERENOL. J. T. Judd and B. C. Wexler (May Inst. for Med. Res. of Jewish Hosp. and Dept. of Pathology, Univ. of Cincinnati, College of Med., Cincinnati, Ohio 45339). *Proc. Soc. Exp. Biol. Med.* 130, 1302-5 (1969). Adult, male Long-Evans rats were challenged with two subcutaneous doses of the potent catecholamine, isoproterenol. Within hours after the first injection myocardial ischemia and necrosis became apparent. On the second day, after the second injection, myocardial necrosis reached a zenith followed by myocardial repair during days 4-7 after the initial injection. During the development of myocardial ischemia and necrosis

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