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## Some Chemical Properties of Vitamin E

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## SOME CHEMICAL PROPERTIES OF VITAMIN E

H. S. OLCOTT

In continuation of work toward the isolation and identification of vitamin E,<sup>1</sup> the following observations have been made. The inactive product obtained by mild bromination of vitamin E concentrates can be reactivated by boiling with Zn dust and HCl in methanol solution. Vitamin E was not destroyed by the catalytic hydrogenation of concentrates at 200° and 200 atmospheres pressure,<sup>2</sup> but the concentrates, after such treatment, were still unsaturated, as indicated by iodine number determinations. An active concentrate of vitamin E has been prepared from crude cottonseed oil.

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FURTHER STUDIES ON THE NUTRITIVE VALUE OF  
ALCOHOL-EXTRACTED ANIMAL TISSUES AND  
THE SUPPLEMENTS REQUIRED FOR  
GROWTH AND LACTATION

WALTER H. SEEGER AND H. A. MATTILL

In order to reveal more clearly the nutritive value of beef heart, kidney, round, and liver, these tissues, after hot alcohol extraction, were incorporated at a 15 per cent protein level in a ration adequate in the recognized factors necessary for normal nutrition. A simultaneous study of the whole dried tissues, at the same level of protein intake, revealed that rats fed the whole tissue made better gains than those on the respective extracted tissues. In those groups receiving the extracted material the most rapid growth was on kidney, and the poorest on liver, while round and heart gave intermediate growth.

Lactation was studied by the method of Kozłowska, McCay, and Maynard(1), with the following basal ration: alcohol-extracted liver 18.7 per cent, hydrogenated cottonseed oil (Crisco) 15 per cent, corn-starch 49.8 per cent, yeast 10 per cent, salt mixture(2) 4.5 per cent, and agar 2 per cent, supplemented daily with 0.5 gm. of yeast and 0.5 cc. of cod liver oil.

<sup>1</sup> Olcott, H. S., and Mattill, H. A., *J. Biol. Chem.* 104, 423 (1934).

<sup>2</sup> We are indebted to Professor H. Adkins of the University of Wisconsin for carrying out the hydrogenation.