

cystin isolated by the Folin method was 7 per cent., while the lime method gave a yield of 6.3 per cent.

24 (1771)

A globulin as the principal protein of the pecan nut: Its chemical and nutritive properties.

By **F. A. CAJORI** (by invitation).

[*From the Department of Chemistry, Stanford University, California.*]

Pecan meal, prepared by removing the oil from the whole shelled nut, was extracted with 10 per cent. sodium chloride solution. This extract containing the proteins of the meal was subjected to fractional precipitation with ammonium sulfate and fractional coagulation by heat. The results indicate that the large part of the protein of the pecan nut is a globulin. This globulin has been isolated and purified and the distribution of its nitrogen determined by the Van Slyke method. Large amounts of basic amino-acids were found to be present in this globulin. It gives a strongly positive test for tryptophane. In general the analysis agrees fairly well with the recently published results of Dowell and Menaul¹ on mixed pecan proteins.

Normal growth has been observed in young rats on diets in which the protein of the ration was derived from the pecan nut, indicating that this nut furnishes adequate quantities of those nitrogenous complexes necessary for growth. In order to render pecan nut diets suitable as rations for rats, it was found necessary to remove the outer layer of the nut since this layer contains large amounts of tannin. Previous failure to observe normal growth in rats on pecan nut diets may be ascribed to the injurious or distasteful effect of the tannins that were present in those diets, and not to an inadequacy of amino-acid yield of the protein of this nut.

¹ Dowell, C. T., and Menaul, P., *J. Biol. Chem.*, 1921, xlii, 437.