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## Nutritive Value of Powered Milk Together with Observations for a New Vitamin for Reproduction

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NUTRITIVE VALUE OF POWDERED MILK TOGETHER  
WITH OBSERVATIONS FOR A NEW VITAMIN  
FOR REPRODUCTION

L. T. ANDEREGG AND V. E. NELSON

(*ABSTRACT*)

Feeding experiments with rats revealed that the whole milk powder employed was adequate as a source of protein and vitamins for growth, reproduction, and rearing of young to the fourth generation. On similarly composed diets wherein skimmed milk powder (and butterfat) was employed in place of whole milk powder, there was marked interference with reproduction. Addition of either wheat embryo or yeast enhanced the nutritive value of the diet but did not make it optimum.

Particularly, when added cod liver oil served as a source of some of the vitamins, decomposition products were observed when the diet was stored for a time. This suggests a possible deterioration of the diet as a result of the interaction of different components upon each other under these conditions. Certain added substances apparently retard this decomposition.

DEPARTMENT OF CHEMISTRY,  
IOWA STATE COLLEGE.

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COD LIVER OIL AS A SOURCE OF VITAMIN A

GEORGIAN ADAMS, L. T. ANDEREGG AND V. E. NELSON

(*ABSTRACT*)

In the course of experiments having for their object the study of the properties of vitamin A with a view to its isolation, certain observations were made concerning the behavior of animals on various rations containing cod liver oil. It was noted that different samples of cod liver oil apparently vary markedly in vitamin A potency. Xerophthalmia has been produced in rats on diets containing as much as 3 per cent of cod liver oil. Synthetic rations containing cod liver oil evolve a penetrating odor resembling acrolein. When the cod liver oil is replaced with butter fat, this

odor is not observed. It is possible that the failure of rats on diets containing certain samples of cod liver oil may be due to one or more of the following factors.

1. A decreased consumption of the diet due to this decomposition product.
2. A destruction of vitamin A which runs parallel with the destruction of the cod liver oil.
3. Certain samples of cod liver oil are not as rich in vitamin A as supposed heretofore.

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### SOME DOLOMITES

NICHOLAS KNIGHT

(*ABSTRACT*)

We have continued the study of so-called dolomite rocks from different localities to learn the variation in the composition of such rocks. One specimen from a deep well boring at Mason City, Iowa, that was supposed to be limestone proved to be nearly a typical dolomite. The composition of the fifteen specimens we have examined, corresponds to our past experience, that specimens of rock called dolomites vary in rather wide limits.

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### THE ACTION OF CERTAIN OXIDIZING AGENTS ON SULFITE AND ITS DETERMINATION

W. S. HENDRIXSON

(*ABSTRACT*)

The oxidation of sulfite in acid solution by dichromate, bromate and permanganate was found to be incomplete, the oxidant used being several per cent short of that required in each case to change sulfite ion completely into sulfate ion. This is probably due to the formation of dithionate, which is not further oxidized. Iodate behaves very differently. These reactions occur at some state of the action:

