products." This idea is in harmony with the observation by Fine and Olsen (3) that a cereal product which had gone rancid at a level of 2.7% moisture, when rehydrated to the levels of 7.6 and 8.3% moisture had lost all trace of rancidity after a subsequent storage interval. This experience has been repeated and confirmed very recently by the author in connection with another flaked wheat cereal.

The last two hypotheses are in fairly complete harmony with the facts relating to the effects of salt and moisture but they offer no explanation for the failure of the added antioxygens so far tried. This failure might be accounted for on the basis that, as pointed out above, wheat bran oil and the oil extract of whole wheat are both remarkably stable, consequently the addition of more antioxygenic material might well fail to be reflected in any measurable increase in stability. Alternately, it might be postulated that added antioxygens, which necessarily contain one or more highly reactive groups, are altered in the cooker batch by reaction with other components of the grain such for example, as partially hydrolyzed protein, carbohydrates, etc.

In conclusion, it is apparent that a great deal more work must be done before a consistent and clear-cut picture of the mechanism whereby cereal flakes become rancid can be presented. However, it is felt that the work which has already been done demonstrates that this problem is in quite a different category from that confronting the manufacturer of shortening or salad oils. The specifications for antioxygens which can be expected to function satisfactorily in the latter cases are fairly well known. On the other hand it appears that a solution of the rancidity problem in cereal flakes must rest more heavily on a study of the colloidal or physical aspects of the flake surface than on a strictly chemical consideration of autoxidation as influenced by antioxygens.

It is not intended to present this paper as a finished piece of research in any sense, since there are many gaps to be filled in the data presented. The justification for presenting this review is in the hope of stimulating interest in a less familiar aspect of the rancidity problem.

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Uniform Methods and Planning Committee Report

Fall Meeting — October 2, 3 and 4, 1940

THERE were only two reports submitted to the Uniform Methods and Planning Committee for action at this time. One was received from the Glycerine Analysis Committee and this merely reported progress, so that no action was required.

The Soap Analysis Committee make the following recommendations, which are concurred in by the Uniform Methods and Planning Committee:

"(1) Pyrophosphate in soap—No recommendations for official action. Further studies to be undertaken.

(2) Combined CO_2 in soap—Recommend tentative adoption of Evolution-Volumetric method. Retain present official absorption method (A.O.C.S.) as alternate.

(3) Free alkali in potash soaps—Studies to be undertaken using isopropyl alcohol as solvent instead of ethyl alcohol.

(4) McNicoll method for rosin in soap—Recommend official adoption of this method and deletion of present Wolff method."

These recommendations were voted upon by the Society and adopted.

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E. B. Freyer
W. D. Hutchins
T. C. Law
C. P. Long
H. P. Trevithick
J. J. Vollertsen, Chairman.