

Note on the Nature of the "Nonlipid" Material Extracted from Flour by Mixtures of Butanol-1 and Water

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In a paper on the extraction of flour by mixtures of butanol and water (1), I suggested that removal of water-soluble pentosans might explain changes in dough properties as a consequence of extraction. Later experiments, however, have not given support to the hypothesis that pentosans are involved in these changes.

These experiments confirmed that the material that was collected in the top layer of the Folch wash procedure (nonlipids) consisted for the greater part, about two-thirds, of sugars. Application of thin-layer chromatography showed, however,

that hydrolysis gives mainly glucose, and only a small percentage of pentoses. This disproves the presence of a considerable amount of pentosans.

When Mr. A. Graveland applied his procedure for the separation of lipids (2) to the top-layer material, he found that a considerable fraction, roughly one-third, behaved as lipids. Apparently, in the earlier paper (1) part of the extracted lipids were incorrectly reported as "nonlipids."

Literature Cited

1. BLOKSMA, A. H. Extraction of flour by mixtures of butanol-1 and water. *Cereal Chem.* 43: 602 (1966).
2. GRAVELAND, A. Combination of thin layer chromatography and gas chromatography in the analysis on a microgram scale of lipids from wheat flour and wheat flour doughs. *J. Am. Oil Chemists' Soc.* 45: 834 (1968).

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