Letter to the Editor

Sirs:

According to AOCS method Ac 3-44, 1973 revision, the sample before extraction should be allowed to dry overnight in a warm room. If the sample contains a very high moisture it should be placed under an oven or other warmer place, so that the resulting moisture will be within 6-8%.

Testing the extract for the phosphatides content, we found that predrying down to 6-8% results in a very low phosphorous content, whereas predrying in a warm room results in an extract with a much higher content.

In order to examine the correlation between the predrying temperature and the phosphorous content in the extract, a sample of soybeans has been predried overnight at different temperatures. The samples were subjected to oil determination according to the AOCS method. The petrol ether extract was examined for phosphorous content, by ashing the oil in the presence of magnesium oxide, followed by colorimetric measurement of phosphorous as molybdenum blue.

Four other samples of soybeans, of different quality, have been tested as well. The results of the tests were as follows:

	Temperature of predrying	Moisture content of predried and ground sample	P.E. extract	Phosphorus content in the P.E. extract
		%	%	%
Sample 1	40 ± 3 C	7.2	19.0	0.009
	"	7.0	18.7	0.005
	30 ± 3 C	8.6	18.7	0.016
	"	9.6	18.8	0.022
	"	10.4	19.1	0.032
	20 ± 3 C	10.3	19.0	0.023
	"	10.5	18.8	0.026
	"	10.1	18.7	0.025
	Without predrying	12.1	19.1	0.048
		11.9	18.9	0.044
Sample 2	40 ± 3 C	8.4	19.3	0.011
Sample 3	"	6.7	18.5	0.005
Sample 4	"	6.4	18.3	0.003
Sample 5	"	8.1	19.3	0.009
	30 ± 3 C	9.5	19.1	0.019
	20 ± 3 C	10.1	19.2	0.026

From the results it is obvious that under the conditions of the method, the magnitude of the P. Ether extract is controlled, but the amount of extracted phosphatides varies.

The phosphorous content in the extract is highly correlated with the moisture content of the ground sample.

The regression data for these observations are as follows:

Correlation coefficient: r = 0.96

$y = 0.0073 \cdot x - 0.047$

where y = phosphorous content in the extract and x = moisture of the predried and ground sample.

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