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Short Communication

Using rating to evaluate quality of peanut products

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Peanuts seeds roasted at 140°C for 40 min for either 25 or 35 min were rated to be of comparable quality with locally available commercial samples. Peanut butter prepared from seeds roasted at160°C for 30 min was also rated to be comparable with commercial samples, while Kwulinkwulis_from seeds dry roasted at 150°C for 25 or 30 min prior to oil roasting of mashed seeds at 170°C for 2 min were accepted by the panel.

Key words: Peanuts, roasting, peanut butter, kwulinkwuli.

INTRODUCTION

Some conditions have been recommended for the preparation of some peanut products (roasted seeds, peanut butter and kwulinkwuli or cake) so as to minimize the aflatoxin levels in the inoculated peanuts seeds used for their preparations (Ogunsanwo et al, 2003 a, b). It therefore becomes necessary to find out if these products were acceptable to the consumers. Thus, these prepared products were compared with the available market samples so as to determine any possible difference in there acceptability.

MATERIALS AND METHODS

Roasted peanut

The preparation of roasted peanut samples involves dry roasting of the seeds in the oven over a period of time at a particular temperature. Therefore, sample A are peanut seeds roasted in the oven at 140°C for 40 min; sample B are peanut seeds roasted in the oven at 150°C for 25 min; sample C are peanut seeds roasted at 150°C for 35 min, while sample D are roasted peanut seeds prepared by the local sellers.

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Peanut butter

The preparation of peanut butter involves dry roasting of peanut seeds in the oven followed by removal of seed testa and grinding of the seeds to obtain butter. Sample A is the commercial available sample; sample B is butter prepared with seeds dry roasted in the oven at 150°C for 45 min; while sample C is butter prepared with seeds dry roasted in the oven at 160°C for 30 min.

Kwulinkwuli

Preparation of kwulinkwuli involves dry roasting of seeds in the oven followed by testa removal, grinding and mashing. The mash is then fried in hot oil. Sample A is the commercial sample prepared by the local sellers; sample B is kwulikwuli prepared from seeds dry roasted in the oven at 150°C for 25 min prior to frying of mash in oil at 170°C for 2 min; and sample C is kwulikwuli prepared from seeds dry roasted in the oven at 150°C for 30 min prior to oil frying of mash at 170°C for 2 min.

Rating of the peanut products

Eleven reputable consumers of peanut products within the University of Ibadan were selected to constitute the panel for the rating. The panel was given a comprehen-

Table 1. Scoring pattern for peanut products.

Scale	Score
Very much more than reference	9
Much more than reference	8
Little more than reference	7
Slightly more than reference	6
Same as reference	5
Slightly less than reference	4
Little less than reference	3
Much less than reference	2
Very much less than reference	1

Table 2. Mean scores for crunchiness, flavour and overall in roasted seeds.

Sample	Crunchiness	Flavour	Overall
A	6.09	4.82	4.82
B	6.36	4.64	5.00
C	5.45	4.36	4.45
D	5.36	5.18	5.45

sive talk on what was expected of the members. The four parameters: crunchiness, flavour, colour and overall were fully explained to the members.

The test was carried out in the afternoon in a brightly lit well-ventilated hall. The panelist were seated so far apart to eliminate any interaction between them and also to reduce distraction. The samples were coded and served fresh with enough cold drinking water. Slices of bread were also provided to assist the evaluation of the butter samples.

The panelists were expected to score each sample with reference to pre-conceived notions/standards derivable in market samples. The scoring pattern used in the study is shown in Table 1.

RESULTS AND DISCUSSION

Typically, good roasted peanut seeds and kwulinkwuli are expected to be crunchy and have characteristic aroma. A good peanut butter is judged mainly by its colour and flavour. Hence, crunchiness and flavour were scored in the roasted seeds and kwulinkwuli while colour and flavour were scored in the peanut butter. The term <overall> was scored for each of the products and this was introduced to account for other qualities which individual members of the panel might consider not (Afonja, 1975)

From the critical values of t for two-tailed test with 20 degrees of freedom a t-value of 2.09 is required for significance at 95% confidence level.

Table 3. Mean scores for colour, flavour and overall in butter.

Sample	Colour	Flavour	Overall
A	6.73	6.36	6.09
B	4.45	4.82	4.82
C	4.82	5.18	5.00

Table 4. Mean scores for crunchiness, flavor and overall in kwulinkwuli.

Sample	Crunchiness	Flavour	Overall
A	5.73	7.27	6.91
B	4.64	5.64	5.55
C	5.0	5.0	5.09

From the average scores for crunchiness, peanut seeds roasted at 140°C for 40 min (A) and those roasted at 150°C for 25 min (B) were rated by the panel to be slightly crunchier than the commercial sample while seeds roasted at 150°C for 30 min (C) were found to be of similar crunchiness with the commercial samples (D). Notwithstanding the ratings, the difference between the crunchiness of the three roasted peanut seed samples and the commercial samples were found to be statistically non-significant. The panel also found no significant difference between the flavours of the three prepared samples and the commercially prepared ones. Similarly, the difference in overall quality for the prepared samples and locally available ones was found by the panel to be non-significant.

The panel agreed that there was a significant difference in the colour of the prepared peanut butter and the commercial samples. However, with respect to flavour and overall, only sample B was found to differ significantly with the commercial sample. Scoring for the butter samples appeared to be a bit difficult probably due to the fact that slices of bread were used for the testing. This difficulty in scoring must have accounted for the large values of range for each set of scores. Nonetheless, sample C was found to be of no significant difference from the commercial sample especially with respect to overall quality and flavour.

The prepared kwulinkwulis were rated by the panel as having no significant difference in crunchiness with the commercial samples. It should be emphasized that crunchiness is about the single most important factor in the evaluation of the quality of the prepared kwulinkwulis. As a result, the quality of the prepared kwulinkwulis could be said to be comparable with that of the commercial samples. Although, the results of the panel seem to suggest significant difference in the flavour and overall preference of the commercial sample, such difference could not appreciably affect the quality of these products

as panelist were openly demanding for the prepared sample after the test.

Preparations of peanut products under conditions, which result in drastic reduction in the aflatoxin levels of these products, have been found not to affect the acceptability of these products.

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