Physico-Chemical and Textural Properties of Peanut Pancakes as Affected by Roast and Reheating Time.

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Peanut meal, a byproduct of the processing industry is a very rich source of protein containing about 44-50% by weight. This nutrient dense material is further processed into a fine flour and has been used with various cereals and pulses such as wheat, sorghum, cowpea and many others in the forms of noodles, breads, cookies and muffins to enhance their nutritional quality. Defatted peanut flour is available in different degrees of roasting (dark, medium and light roast) and different fat contents (12% and 28%). Understanding the effect of roasting on the physicochemical properties of peanut flour, can help develop and optimize formulations that allow a substitution of decent amount of peanut flour and thereby increase the nutritional value of the products. Due to the popularity of pancakes as favorite food for breakfast, they have been chosen in this study as potential vehicles to deliver the target protein and essential nutrients to help meet the nutritional requirements. Furthermore, popularity of the frozen meals and breakfast items has grown significantly in recent years and frozen pancakes are one such easy and ready to eat options. Hence, this project was designed to investigate the effect of freezing and reheating to facilitate the preparation of peanut pancakes for school lunch program or for the general consumer as a ready to use peanut pancake mix.

Two different peanut flours, 12% fat medium roast (12M) and 28% fat light roast (28L) were used for the study. All-purpose flour, peanut oil, baking soda, baking powder, non-fat dry milk, enriched golden peanut oil, sugar, salt and dried egg powder were used for the studies. Effect of wheat flour substitution (at 30%) with 12 or 28% fat peanut flour at either light or medium roast levels was investigated on the physico-chemical and textural properties of the pancakes. Both fresh and reheated (frozen) pancakes were evaluated for bulk density, volume, hardness, chewiness, springiness and cohesiveness, while reheated pancakes were further evaluated for volume loss and moisture loss. The results indicated that roast had no significant effect on any of the above listed properties except for springiness. In the case of reheated pancakes, the above listed properties were significantly affected by the reheating time.