

Proximate Composition, Colour and Sensory Properties of Akara egbe Prepared from Bambara Groundnut (*Vigna subterranea*)

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Abstract : Bambara groundnut is an underutilised leguminous crop that has a similar composition to cowpea. Hence, it could be used in making traditional snack usually produced from cowpea paste. In this study, akara egbe, a traditional snack was prepared from Bambara groundnut flour or paste. Cowpea was included as the reference sample. The proximate composition and functional properties of the flours were studied as well as the proximate composition and sensory properties of the resulting akara egbe. Protein and carbohydrate were the main components of Bambara groundnut and cowpea grains. Ash, fat and fiber contents were low. Bambara groundnut flour had higher protein content (23.71%) than cowpea (19.47%). In terms of functional properties, the oil absorption capacity (0.75 g oil/g flour) of Bambara groundnut flour was significantly ($p \leq 0.05$) lower than that of the cowpea (0.92 g oil/g flour), whereas, Cowpea flour absorbed more water (1.59 g water/g flour) than Bambara groundnut flour (1.12 g/g). The packed bulk density (0.92 g/mL) of Bambara groundnut was significantly ($p \leq 0.05$) higher than cowpea flour (0.82 g/mL). Akara egbe prepared from Bambara groundnut flour showed significantly ($p \leq 0.05$) higher protein content (23.41%) than the sample made from Bambara groundnut paste (19.35%). Akara egbe prepared from cowpea paste had higher ratings in aroma, colour, taste, crunchiness and overall acceptability than those made from cowpea flour or Bambara groundnut paste or flour. Bambara groundnut can produce akara egbe with comparable nutritional and sensory properties to that made from cowpea.

Keywords : Bambara groundnut, Cowpea, Snack, Sensory properties

Conference Title : ICALS 2018 : International Conference on Agriculture and Life Sciences

Conference Location : Dublin, Ireland

Conference Dates : January 30-31, 2018