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QUALITY ASSESSMENT OF NOVEL COOKIES MADE FROM SPROUTED SORGHUM, WHOLE BAMBARA NUTS AND RIPE BANANA MASH

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Abstract
This study evaluated the quality of cookies formulated from composite flours of sprouted sorghum, Bambara groundnut and ripe banana mash in ratios of 100:0:0, 90:10:0, 85:10:5, 80:10:10, and 75:10:15, labeled as samples A, B, C, D, and E, respectively. The samples were analysed for proximate, mineral and sensory characteristics using standard methods. Sample C had the highest protein content (9.52%). Fat content varied between 20.96 and 29.45%, with sample D showing the lowest fat concentration. Moisture content ranged from 4.16 to 4.97%, with sample D containing the highest level, suggesting it may have a shorter shelf life. Ash content ranged from 1.46 to 3.44%, while crude fiber varied between 1.20 and 1.83%, with sample C containing the most fiber, highlighting its potential as a functional food. Carbohydrate content was highest in sample B, ranging from 55.39 to 63.13%. The energy content ranged between 452.57 and 512.34 kcal. Mineral analysis showed sodium (82.47-96.53 ppm), calcium (118.40-194.43 ppm), potassium (398.30-644.50 ppm), zinc (2.73-3.43 ppm), magnesium (15.92-25.25 ppm), and iron (1.07-1.85 ppm), with favourable Ca/P and Na/K ratios. Sensory evaluation revealed that sample D (80% sorghum, 10% Bambara, 10% banana) was most preferred by the panelist for taste and texture. These results indicate that this composite flour cookies could serve as nutritious snacks to help prevent malnutrition in young adults and children.

Keywords: *Formulated, Proximate, shelf life, Cookies, Malnutrition*

1. *Introduction*

The rising population, neglect of nutrient-rich indigenous crops and persistent postharvest losses are key factors hindering global efforts to eradicate hunger, reduce malnutrition, and ensure food security (Adubofuor *et al.,* 2016).

Processing and application of underutilized indigenous legumes as well as incorporation of highly perishable crops such as fruits

In Nigeria, cookies are one of the most consumed cereal foods apart from bread, because they are readily available in local shops as ready to eat, cheap, convenient and appetizing food products (Dauda *et al.,* 2018). Cookies, baked soft-sorghum dough snacks, have become one of the most desirable snacks for large group of people around the world due to their low manufacturing cost, convenience, long shelf-life attributable to low moisture content and ability to serve as a vehicle for essential and non-essential nutrients (Akubor, 2003; Hooda and Jood, 2005).

Sorghum, a cereal widely appreciated for its gluten composition, is the primary

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ingredient employed in most bakery products. Although carbohydrates form the bulk of their nutrients, they also contain other macro and micronutrients, including vitamins and minerals. However, various factors such as the adverse economic effect of sorghum importation on low or non-sorghum-producing countries, poor protein quality due to lysine deficiency, and the association of sorghum protein with celiac disease in gluten-sensitive individuals have necessitated the substitution of nutritious locally grown crops such as legumes in or for sorghum. For instance, bambara groundnut has been used to substitute sorghum for biscuit and croissant snack production respectively (Arise *et al.*, 2017a; Arise *et al.*, 2020). Bambara groundnut (*Vigna subterranean* (L.) Verdc.), a legume of African origin, majorly contains carbohydrate and protein (15-27%) with substantial amounts of amino acids especially lysine and methionine which are known to be deficient in cereals and many other legumes, respectively (Arise *et al.*, 2015; Arise *et al.*, 2017b). It is therefore a suitable supplement that could be used with cereals to tackle protein-energy malnutrition which is prevalent in Africa. Unfortunately, like many other legumes, the utilization of Bambara groundnut is hindered by its hard-to-cook phenomenon, perceived beany flavour, poor protein and mineral digestibility due to the presence of anti-nutrients and the presence of flatulence causing oligosaccharides. Consequently, concentration or isolation of proteins from legumes and application for enhanced protein functionality, digestibility, and bioavailability are being suggested and studied (Arise *et al.*, 2015; Boye *et al.*, 2010; Falade and Akeem, 2020) Cavendish banana which may be eaten raw when ripened or cooked when it is green contains majorly carbohydrates followed by proteins, lipid (rich in polyunsaturated fatty acids) and substantial quantities of vitamins and minerals such as potassium, magnesium, calcium and sodium (Adubofuor *et al.*, 2016). Also, carotenoids, phenolic compounds, flavonoids and amine compounds as dopamine have been documented in its pulp and peel (Pereira *and* Maraschin, 2015; Tsamo *et al.*, 2015). The advantages of banana flour prepared from ripe banana include high sugar content suitable for incorporation into food products requiring solubility, sweetness and high energy content (Abbas *et al.*, 2009). Although the good flavour, nutritional characteristics, and health benefits of bananas make them one of the most consumed fruits worldwide, their short shelf life and the decrease in their acceptability after ripening calls for alternative value-addition measures to curb their wastage (Adubofuor *et al.*, 2016; Soto-Maldonado *et al.*, 2020). Prevention of waste, restraint, and reduction of waste are widely recognized as a solution for "end-of-pipe" treatment (Jeya *et al.*, 2020). The use of ripe banana mash will lead to a reduction in wastage that occurs during the season. Consequently, this work evaluates the proximate composition and sensory qualities of cookies developed from sprouted sorghum whole, bambara nuts blended with ripe banana mash for quality assessment.

2. *Materials and Methods*

2.1 *Materials*

The raw materials (Sorghum, Bambara Groundnut and Ripe Banana) used for this project work were obtained from Oja Oba in Ado Ekiti.

Production of sprouted sorghum into flour

The sorghum grain was properly cleaned in other to remove the bad ones to obtain good quality product. The sorted and cleaned grains were soaked in clean water for 15

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mins, it was drained in a perforated bowl and was later spread on trays. Water was sprinkled on it for it to be sprouted. This procedure was repeated for 72 h, for the grains to be well sprouted. After 72 h, the sprouted sorghum was rewashed to remove the sprouts. The sprouted grains were spread on the tray and sundry for another 72 h before it was taken to the milling machine for milling. After milling, it was sieved and properly packaged further use.

Production of Bambara groundnut

Bambara groundnut was cleaned by sorting out the foreign materials, milled, sieved and properly packaged for further use

Production of banana mash

The ripe bananas were cleaned, peeled, and blended to obtain banana mash.

Formulation

Sample	Sprouted sorghum (%)	Bambara groundnut (%)	Ripe banana mash (%)
A	100	0	0
B	90	10	0
C	85	10	05
D	80	10	10
E	75	10	15

Each of the sample was mixed with a standard and known weight of sugar, butter, bicarbonate, baking powder, salt, non-fat milk, and water. It was baked in an already preheated oven at 200°C until it was properly baked which lasted for 20 mins. The baked samples were allowed to cool and properly packaged in a nylon packaging material for sensory evaluation.

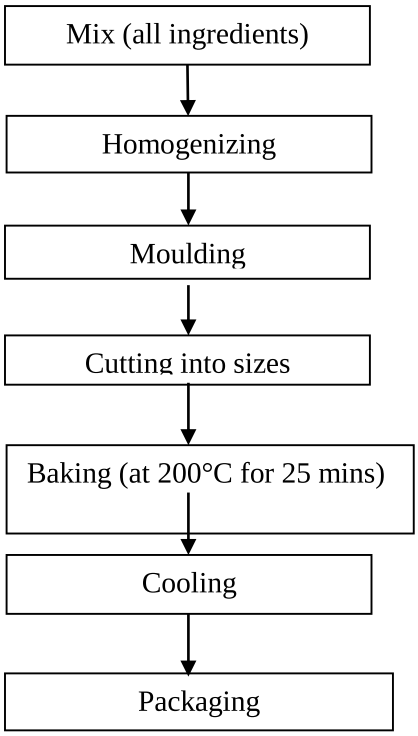

Fig. 1. Flow chart for the production of cookies

Fig. 2. Baked cookies

2.2 Methods

2.2.1 Proximate analysis

The moisture, ash, fiber, oil, protein, and carbohydrate content of flour were determined in triplicate and the mean values were reported.

2.2.1.1 Moisture Content Determination

Moisture content was determined by the method of (AOAC, 2010). Two grams of each of the sample was weighed into a dried and weighed crucible and dried in a hot air oven (MIDO/3/SS/F Model D3S, Genlab Widens, England) at 105°C for 6 h. The sample was removed, cooled to room temperature in a desiccator and weighed. The sample was returned to the oven, dried, and reweighed until constant mass was obtained. The difference in mass between the wet and dried sample was calculated and expressed as a percentage of the mass of the original sample.

$$\%\ \text{Moisture} = \frac{\text{wt of sample before drying} - \text{wt of sample after drying}}{\text{Wt of sample before drying}} \times 100$$

2.2.1.2 Ash content determination

Ash content was determined by the method of (AOAC, 2010). Two grams of sample was transferred into a dried and weighed pre-ignited and pre-weighed porcelain crucible and combusted in a muffle furnace (Gallenkamp, Model OV160, Leicestershire, United Kingdom) at 600 °C for 2 h at which time the sample had turned white and was free of carbon. The crucibles containing ash were cooled to room temperature in a desiccator and re-weighed. Loss in mass was calculated as percentage ash content.

$$\%\ \text{Ash} = \frac{\text{wt of crucible} + \text{ash} - \text{wt of crucible}}{\text{wt of sample}} \times 100$$

2.2.1.3 Determination of crude fat content

The crude fat content of the sample was determined using the following method (AOAC, 2010). Two grams of sample was transferred into a 22 × 80 mm 33 paper thimble and capped with glass wool,

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dropped into a thimble holder and attached to a pre-weighed 500 ml round bottom flask containing 200 ml petroleum ether (60 °C) and assembled on a semi-continuous soxhlet extractor. Contents of the thimble were refluxed for 16 h, after which the petroleum ether was recovered in a steam water bath. The flask and its contents were heated for 30 min in an oven at 103 °C to remove residual petroleum ether, cooled in a desiccator and weighed. The increase in the mass of the flask was recorded as crude fat, from which the percentage of crude fat was calculated.

$$\%\,\text{Fat} = \frac{\text{weight of fat}}{\text{weight of sample}} \times 100$$

2.2.1.4 Determination of crude protein

Protein content was measured following the Kjeldahl nitrogen determination of (AOAC, 2010). Two grams of each sample in a Kjeldahl flask was added 25 ml of 98% H_2SO_4 with catalyst (3.5 g potassium sulphate: 0.105 g copper sulphate: 0.105 g titanium oxide) and digested till the colour of the solution turned clear. The solution was transferred into a volumetric flask and the volume made up to the 100 ml mark with distilled water. Ten milliliters of the solution were distilled and titrated against 0.1 M hydrochloric acid against a blank and titre values recorded. Percentage nitrogen was calculated and converted to percent crude protein by multiplying by a factor of 6.25.

$$\%\,\text{N} = \frac{14 \text{ x VA x } 0.1 \text{ x w x}100}{1000 \times 100}$$

$$\%\,\text{protein} = \%\,\text{N x } 6.25$$

2.2.1.5 Crude fibre determination

Crude fibre was determined following the method of (AOAC, 2010). Two grams of sample was transferred into 750 ml Erlenmeyer flask, 200 ml of boiling 1.25 % H_2SO_4 was added and refluxed for 45 min. The mixture was screened through cheese cloth and residue washed with large volume of boiling water until filtrate was no longer acidic. The reflux was repeated with 1.25 % sodium hydroxide, screened 34 and washed to remove all alkali as before. The residue was transferred to a previously weighed porcelain crucible (M1), dried for 1 h at 100°C in a hot air oven (MIDO/3/SS/F Model D3S, Genlab Widens, England), cooled in a desiccator, and re-weighed. The crucible was ignited in the muffle furnace (Gallenkamp, Model OV160, Leicestershire, United Kingdom) at 600 °C for 30 min and re-weighed after cooling in a desiccator. Difference in mass of the crucible following ignition was recorded as crude fibre and expressed as percentage of the original mass of flour.

$$\%\,\text{Crude fibre} = \frac{\text{Dry wt of residue before ashing} - \text{wt of residue after ashing}}{\text{Wt of sample}} \times 100$$

2.2.1.6 Carbohydrate content determination

Carbohydrate content was calculated by the difference between 100 and the sum of all other proximate parameters (moisture + ash + protein + fibre + fat).

CHO % = 100 - (moisture + ash + protein + fibre + fat)

2.2.1.7 Energy content

Gross energy in joules per 100 g dry matter was calculated based on the formula:

Gross energy = (Crude protein ×16.7) + (Crude lipid×37.7) + (Carbohydrate ×16.7) (Ekanayake *et al.*, 1999).

2.4 Sensory Evaluation of Cookies

Cookies were evaluated for taste, colour, flavour, texture and overall acceptability using 9-point hedonic scale, where 9-liked extremely and 1-disliked extremely as described by Islam et al. (2012). Twenty panelists participated in the sensory evaluation test while the coded snacks samples were randomised and presented to the panelists.

2.3 Determination of mineral composition of cookies

The atomic absorption spectrophotometer (AAS) was used to place a lamp that corresponded to the mineral in the AAS and set the wavelength specific to the mineral or heavy metal to be measured. After running the standards for the selected minerals (calcium, magnesium, potassium, iron, zinc, and phosphorus), the AAS siphoning hose was submerged in the digested sample. The convergence of the metal in the arrangement was shown on the screen of the AAS machine (Relationship of Logical Scientists (AOAC), 2010).

Statistical analysis

All analysis was determined in triplicates and data were subjected to analysis of variance (ANOVA) using statistical package for social scientist (SPSS version 21) computer package. Mean we're separated by New Duncans' Multiple Range Test, significance was taken at p ≤0.05. Error was reported as standard deviation from mean.

3. Result and Discussion

3.1 Results

Table 1: The result of the proximate composition of cookies (%)

Samples	Protein	Fat	Moisture	Ash	Crude fibre	Carbohydrate	Energy Value
A	6.438^{d} ±0.121	29.447^{a} ±0.421	4.337^{c} ±0.067	3.189^{b} ±0.017	1.197^{c} ±0.059	55.392^{d} ±0.468	512.34
B	7.046^{c} ±0.053	21.049^{c} ±0.302	4.163^{d} ±0.057	3.195^{b} ±0.051	1.416^{b} ±0.147	63.131^{a} ±0.057	452.57
C	9.524^{a} ±0.096	21.917^{b} ±0.251	4.558^{b} ±0.080	3.438^{a} ±0.114	1.825^{a} ±0.120	58.738^{c} ±0.310	470.29
D	8.382^{b} ±0.033	20.958^{c} ±0.061	4.966^{a} ±0.058	1.553^{d} ±0.115	1.460^{b} ±0.129	62.681^{a} ±0.186	472.87
E	8.345^{b} ±0.033	22.049^{b} ±0.243	4.591^{b} ±0.091	2.128^{c} ±0.092	1.783^{a} ±0.187	61.174^{b} ±0.290	476.51

Mean ± standard deviation of triplicate determinations, mean in the same column with the same superscript are not significantly different (p>0.05).

A= 100% sprouted sorghum, B =90% sprouted sorghum and 10% Bambara groundnut, C = 85% sprouted sorghum, 10% Bambara groundnut and 5% ripe banana mash, D = 80% sprouted sorghum, 10% Bambara groundnut and 10% ripe banana mash, E = 75% sprouted sorghum, 10% Bambara groundnut and 15% ripe banana mash.

3.2 Proximate composition

Table 1 show that the result of the proximate composition of cookies produced from sprouted sorghum, bambara groundnut and ripe banana mash. It was observed that the least protein content was found in sample A (100% sprouted sorghum) (6.438%) and the highest protein content was found in sample C (85% sprouted sorghum, 10% Bambara groundnut and 5% ripe banana mash) (9.524%) which was significantly higher than the other samples. This could be as a result of the addition of 10% Bambara groundnut which leads to the increase in protein content of the cookies, which could be a better source of protein for those that are suffering from protein malnutrition. Protein content of sorghum based composite flour could enhanced through the incorporation of leguminous crops. Fat content ranged between (20.958 - 29.447%). It was observed that the least fat content was found in sample D (80% sprouted sorghum, 10% Bambara groundnut and 10% ripe banana mash) 20.958% and the highest fat content was found in sample A (100% sprouted sorghum). This is an indication that sample A can easily be susceptible to oxidative rancidity due to its high percentage of fat. Therefore, sample C and E were not significantly ($p < 0.05$) different but were significantly lower compared to sample A difference. Fat content usually plays a role in shelf -life stability of the samples. The relatively low-fat content in cookies reduces the chances of being exposed to low-density-lipoprotein (LDL). The moisture content ranged between (4.163 - 4.966%). It was observed that the least moisture content was found in sample B (90% sprouted sorghum, 10% Bambara groundnut). This shows that the low moisture in sample D will indicates a longer shelf life. Although, the moisture content obtained in this research work was still higher than the one reported by Akoja and Coker (2018). The highest moisture was observed in sample E (75% sprouted sorghum, 10% Bambara groundnut and 15% ripe banana mash). This is an indication that it can be easily susceptible to mould deterioration.

The ash content ranged between (1.455 - 3.438%). The ash content of sample A and B were not significantly different ($p < 0.05$) from each other. However, the highest value of ash was noticed in sample C (85% sprouted sorghum, 10% Bambara groundnut and 5% ripe banana mash) 3.438%, this indicates a good precursor for the availability of essential minerals. The crude fibre content ranged between (1.196 - 1.824%). The crude fibre content increased in the sample as the substitutional level of ripe banana mash increased in the composite flour. This shows that the composite blends are good source of fibre and can be used in the preparation of functional food products such as cookies and other types of snacks, that should be encouraged in our daily meal. Water soluble pectin which is responsible for pulp softening during ripening has been found to be the major component of ripe banana fibre (Adobofuor *et al.,* 2016). The trend obtained for ash, fat, and fibre contents of the cookies in this study corroborate the report of Ng et al. (2020) in chocolate cookies containing overripe banana pulp. The carbohydrates content ranged between (55.392 - 63.131%), it increases with the inclusion of 10 % bambara groundnut or with the incorporation 10 % bambara groundnut and 10 % ripe banana mash. Carbohydrates are known to be a good source of energy when consumed. However, the highest carbohydrate content in sample B could be as a result of the high content of starch present in 90% sorghum flour compared to other blends, although not significantly (p>0.05) different from sample D.

Table 2: Mineral Composition of Cookies (ppm)

Samples	Na	Ca	K	Zn	Mg	Mn	Fe	Cu	P	Ca/P	Na/k
A	85.47^{d} ±0.13	118.40^{e} ± 0.10	398.30^{e} ± 0.10	2.73^{e} ±0.00	17.34^{d} ± 0.01	0.62^{e} ±0.01	1.07^{e} ±0.01	0.53^{a} ±0.00	41.93^{e} ±0.02	2.82	0.22
B	93.60^{b} ±0.27	132.49^{c} ±0.10	530.45^{c} ±0.150	3.17^{c} ±0.00	18.57^{c} ±0.02	0.81^{c} ±0.01	1.47^{c} ±0.00	0.32^{c} ±0.00	56.39^{c} ±0.02	2.35	0.18
C	82.47^{e} ±0.31	125.73^{d} ±0.15	410.20^{d} ± 0.27	2.98^{d} ±0.01	15.92^{e} ± 0.01	0.74^{d} ±0.00	1.18^{d} ±0.01	0.31^{d} ±0.00	45.64^{d} ±0.47	2.76	0.20
D	96.53^{a} ±0.15	194.43^{a}±0.15	644.50^{a} ±0.30	3.98^{a} ±0.00	25.25^{a} ±0.01	0.97^{a} ±0.01	1.85^{a} ±0.01	0.29^{e} ±0.00	62.66^{a} ±0.01	3.11	0.15
E	90.23^{c} ±0.12	181.63^{b} ± 0.12	608.53^{b} ±0.25	3.43^{b} ± 0.01	20.65^{b} ± 0.01	0.93^{b} ± 0.02	1.52^{b} ±0.01	0.40^{b} ± 0.00	57.81^{b} ± 0.01	3.14	0.15

Mean ± standard deviation of triplicate determinations, mean in the same column with the same superscript are not significantly different (p>0.05).
A= 100% sprouted sorghum, B=90% sprouted sorghum and 10% Bambara groundnut, C = 85% sprouted sorghum, 10% Bambara groundnut and 5% ripe banana mash, D = 80% sprouted sorghum, 10% Bambara groundnut and 10% ripe banana mash, E= 75% sprouted sorghum, 10% Bambara groundnut and 15% ripe banana mash.

3.3 Mineral Composition

The selected macro (potassium, magnesium, calcium, sodium and phosphorus) and micro (Iron, copper, zinc and manganese) nutrients composition of cookies produced from sprouted sorghum supplemented with whole bambara groundnut and ripe banana mash were presented on Table 2. These minerals are essential for human nutritional quality for their proper muscular activities, skeletal development, growth in children, fluid balance, nerve transmission and body functioning (Adoboufuor *et al.*, 2016). Sample C (85% sprouted sorghum, 10% Bambara groundnut and 5% ripe banana mash) had the least sodium content (82.47 ppm) compared to other samples but increase in the percentage of ripe banana mash in the blends further increase the sodium content. Supplementing the blends for the cookies with 10% bambara groundnut and 10% ripe banana mash resulted in significant increase (p>0.05) in calcium content compared to other samples. Moreso, there was a notable increase in potassium (644.5ppm), calcium ((194.43ppm)), magnesium (25.2ppm), manganese, iron and zinc content in the cookies with 10% of ripe banana mash (sample D) showing that attaining an optimum or appreciable quantity of micronutrients may not necessarily needs the increase of ripe banana mash beyond 10%. The significance reduction (less than one) in the sodium to calcium ratio was observed across all the cookies which was desirable as low sodium diet could aid in regulating blood pressure (Arise *et al.*, 2017a). Calcium to phosphorous was more than one would be so helpful for aged and children for healthy bone.

Table 3: Sensory Evaluation of Cookies

Samples	Colour	Flavour	Taste	Texture	Overall Acceptability
A	7.400^{ab}±1.51	6.600^{b}±0.54	7.000^{bc}±1.22	5.000^{c}± 1.00	7.400^{b} ± 1.34
B	7.600^{ab} ±0.89	7.600^{b}±0.54	6.000^{c} ± 1.22	6.800^{b} ±1.09	7.200^{b} ± 0.44
C	7.800^{ab}±1.09	7.400^{b}±1.51	7.200^{bc}±1.48	6.800^{b} ± 1.30	7.400^{b} ± 1.14
D	9.000^{a}±0.00	9.000^{a}±0.00	8.800^{a}±0.44	8.800^{a} ± 0.44	9.000^{a} ± 0.00
E	7.000^{b}±1.00	5.800^{c}±0.44	6.800^{bc}±1.09	6.800^{b} ± 1.09	7.000^{b} ± 1.41

Mean ± standard deviation of triplicate determinations, mean in the same column with the same superscript are not significantly different (p>0.05).

A= 100% sprouted sorghum, B=90% sprouted sorghum and 10% Bambara groundnut, C = 85% sprouted sorghum, 10% Bambara groundnut and 5% ripe banana mash, D = 80% sprouted sorghum, 10% Bambara groundnut and 10% ripe banana mash, E= 75% sprouted sorghum, 10% Bambara groundnut and 15% ripe banana mash.

3.4 Sensory evaluation of cookies made from sprouted sorghum, bambara groundnut and ripe banana mash

Table 3 shows the result of sensory evaluation of cookies made from sprouted sorghum, bambara groundnut and ripe banana mash. The organoleptic characteristics such as colour, flavour, taste, texture and overall acceptability were evaluated. Colour is an important factor that facilitates the consumer's preference for product acceptability. Evaluation based on colour shows that sample A was rated best but not significantly (p<0.05) different from other samples except sample D being the least rated sample. Flavour ranged between (5.800 - 9.000). Sample D was rated best in flavour which was significantly higher and different from other samples. Inclusion of 10% bambara groundnut and 10% ripe banana mash improved the flavour of the cookies which could be as a result of the addition of ripe banana. As ripe banana contains ethylene most especially as their respiration continues which indirectly enhance flavour in food and in food product. This observation aligns with the findings of Arise et al. (2021), who reported similar results in their study on wheat cookies enriched with Bambara groundnut protein isolate, either independently or combined

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with 10% ripe banana mash. Evaluation based on taste ranged between (6.000 - 8.800). Sample D was rated best compared to other samples. It was observed that there was no significant different (p>0.05) between C and E while sample B and D are significantly different (p<0.05). The difference could be as a result of the incorporation of 10% ripe banana mash. As ripening continues in banana fruit, the sugar content increases, which eventually improve the taste of the final product. Evaluation based on texture ranged between (5.000-8.800). Sample A was rated least which could be because of lack of gluten in the composite flour, 100% sprouted sorghum was used to produce cookies. While sample D (80% sprouted sorghum, 10% bambara groundnut and 10% ripe banana mash) was rated best. This could be as a result of incorporation of bambara groundnut and ripe banana mash. The overall acceptability ranged between (7.000 - 9.000). It was observed that sample D was rated best among all samples, the rating by the panelist in this research was corroborate what was recorded in cookies that contain 20 % and above of wheat germ flour in the blends for cookies production (Buyuk and Dulger, 2024). The other samples were not significantly (p>0.05) different from one another.

4. Conclusion

The study showed that nutritious and quality cookies with potential health benefits could be produce from sprouted sorghum, bambara groundnut and ripe banana mash based on the result achieved from the proximate, mineral composition and sensory attributes. Addition of bambara groundnut improved the protein content, also inclusion of ripe banana mash improved the crude fibre, ash, calcium. potassium and Ca/P ratio content of the cookies. On the overall acceptability, sample D with (80% sprouted sorghum, 10% Bambara groundnut and 10% ripe banana mash) was rated best.

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