



Study on Standardisation and Quality Evaluation of Peanut Milk by Different Processing Methods

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Peanut (*Arachis hypogea*) is an important oilseed crop originated from South Africa, while India representing one of its leading producer nearly 14% of world peanut production. Now a days some of the lifestyle changes and medical issues like cow's milk allergy, lactose intolerance and hypercholesterolemia people were shifted into plant based nondairy beverages. Peanut milk was developed from two different peanut varieties viz., TNAU CO-6 and local variety. Proximate composition of local and TNAU CO 6 variety of peanut was analyzed and the carbohydrates, protein, fat was high in TNAU CO 6 peanut variety and its value was 26.7 (g/100g), 27.8 (g/100g), 38(g/100g) when compared to local variety, its value was 25.2 (g/100g), 24.7 (g/100g), 39(g/100g) respectively. Peanut milk was extracted by five different processing method: fresh soaking, blanching, roasting and germination methods in both local and TNAU CO 6 variety. Peanut milk prepared without any treatments and processing was considered as a control peanut milk. Among the different treatment, the best treatment was selected based on sensory scores in each processing methods of both peanut varieties. Among these different treatments blanching method

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B1 (2mins) was best in local variety, B2(3 mins) was best in CO 6 variety. In roasting method R2 (roasting for 5 mins and soaking for 3 hrs), soaking method S2(3 hrs soaking), germination method G1(8 hrs germinated) was best treatment in both the selected peanut varieties. Based on the observation and sensory evaluation, the result showed that among these five processing methods roasting method was the best method for the peanut milk extraction and its physiochemical properties were analyzed in both the varieties of prepared peanut milk among these CO 6 variety peanut milk had good result and better acceptability.

Keywords: Blanching; soaking; roasting; germination; peanut milk.

1. INTRODUCTION

Animal based milks are the common substrate used for the production of dairy products. Plant milk sources are an alternative choice for cow milk allergy, lactose intolerance, more preference to vegan diets and more suitable to infants, children and adult age group. Satisfying customers' demands for special needs at the lowest possible cost has always been the major challenge faced by the foodservice industry.

Non dairy or plant based milk contains highly nutritional making it more suitable for infants, children, malnourished and undernourished persons, it was least expensive so low economic people also affordable. Now a days non dairy based beverage sector development was increased dramatically.

Peanuts (*Arachis hypogea*) is an important oilseed crop belonging to the family (Fabaceae) of legume and it is technically considered as peas. Peanut was originated in south America for thousand years ago. Peanut is otherwise known as ground nut, wonder nut, poor men's cashew nut [1]. According to (FAOSTAT, 2016) In West Africa Nigeria has 1,130 kg/ha and Senegal has 817 kg/ha groundnut productivity and Niger has 588.2 kg/ha groundnut productivity. China was the most leading producer of peanut which occupies first rank in worldwide peanut productivity it nearly occupied 45% share, India occupies 16% share, USA occupies 5 % share among world peanut production [2].

Consumption of peanuts or peanut butter provided vitamin A, vitamin E, folate, dietary fiber, iron, zinc, calcium, and magnesium it helps to meet the daily requirement needed for the body [3].

People who had lactose intolerance allergies cannot able to digest lactose content in the food it cause some discomfort to lactose intolerant people. Peanut does not contain lactose, so the products developed from peanut are more suitable for those people, it also helps for

combating malnutrition for infants and children. In case of dairy cows milk quantity was insufficient or too expensive its best alternative was non dairy milk based beverages prepared from peanut and soya beans and also act as a nutritional substituted for dairy. Non dairy or plant based milk was easily digestible when compared with dairy milk [4].

Most of the developing countries poor people were facing deficiency disorders especially protein deficiency disorders. protein energy malnutrition causes marasmus, kwashiorkor disease. This deficiency can be prevented by adequate intake of vegetable protein, it was high quality and low cost protein [5].

Now a days consumers health conscious was increased and the consumer interest can be increased in plant based vegetable milk and its products due to its nutritional values [6]. Plant based milk is an suitable alternative for dairy milk, plant milk was prepared by, graded, precleaned plant material, grinded with water, separated the slurry, filtered through muslin cloth and extracted the plant based milk it looks alike appearance of cow's milk [7]. The study was under taken with the objective of developing peanut milk with quality characteristics as that of milk.

2. MATERIALS AND METHODS

2.1 Procurement of Raw Materials

Local variety of raw shelled, mature, mould free peanut variety was purchased from a local market in madurai. TNAU CO 6 variety of dry shelled, mature, mould free peanut variety was purchased from Tamil Nadu Agricultural University, Coimbatore. Refined sugar, palm sugar, cardamom, artificial badam flavor were purchased from local store in Madurai.

2.2 Preparation of Peanut Milk

Peanut milk was prepared by using five different processing methods as follows:

2.2.1 Blanching method

As per the method Parul Jain [8] with slight modification Local variety and CO 6 variety of peanut was blanched by pressure blanching method. In this method both the peanut varieties were deshelled, weighed (100 g) and blanched at different time intervals (121°C 15 psi for 2,3,5,7 minutes). Then it was washed and grinded (1:3 ratio kernels to water). Peanut milk was filtered by using muslin cloth then it was homogenized. Peanut milk was subjected to double pasteurization (85°C for 15 mins) cooled and stored in a bottle.

2.2.2 Roasting method

As per the method of Salunkhe and Kadam [9] peanut milk was prepared with slight modifications. Local variety and CO 6 variety of peanut was roasted by open pan roasting method. In this method also both the varieties of

peanuts were deshelled, weighed (100 g) and subjected to different treatments like T0-Control, T1-Roasting, T2- Roasting and soaking then the treated peanuts were grinded (1:3 ratio kernels to water). Peanut milk was filtered by using muslin cloth then it was homogenized. Peanut milk was subjected to double pasteurization (85°C for 15 mins) cooled and stored in a bottle.

2.2.3 Soaking method

As per the method of Jain [10] peanut milk was prepared with slight modification. In this method both local variety and CO 6 variety of peanut were soaked for different time intervals 2,3,5,7 hrs soaking. Then treated peanuts were washed and grinded with water (1:3 ratio kernels to water). The slurry was filtered by muslin cloth and extracted the peanut milk then it was homogenized for 5 mins. It was double pasteurized (85°C for 15 mins) and cooled.

Table 1. Different treatment procedure

Treatments	Different blanching time
B0	Control
B1	2 mins
B2	3mins
B3	5mins
B4	7mins

Table 2. Treatment with roasting procedure

Treatment	Roasting
R0	Control
R1	Roasting (5mins)
R2	Roasting(5 mins) and soaking(3 hrs)

Table 3. Treatment with soaking time interval

Treatments	Soaking time interval
S0	Control
S1	2 hrs soaking
S2	3 hrs soaking
S3	5 hrs soaking
S4	7 hrs soaking

Table 4. Treatment with germination time

Treatments	Germination time
G0	Control
G1	8 hrs
G2	12 hrs
G3	24 hrs

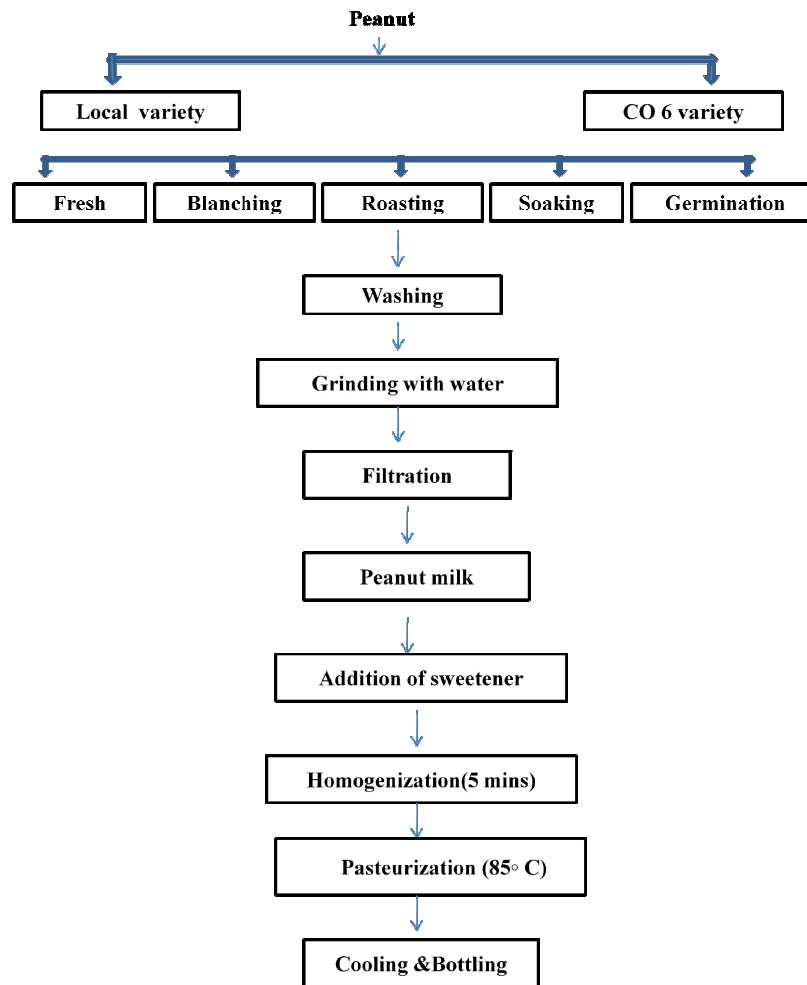


Fig. 1. Process flow chart of peanut milk preparation

2.2.4 Germination method

As per the method of Ikemefuna [11] with slight modification In this method both the local and TNAU CO 6 varieties of peanuts were soaked for 6 hours and germinated at different time intervals for different treatments like 8,12,24 hrs germination. Then peanuts were washed and grinded with (1:3 ratio kernels to water).the peanut milk was extracted and filtered by muslin cloth, homogenized, double pasteurized (85°C for 15 mins) and cooled.

2.2.5 Fresh peanut milk production

Local and CO 6 variety of peanuts were deshelled, weighed (100 g), washed and grinded with water (1:3 ratio kernels to water). The slurry was filtered by muslin cloth and the peanut milk was extracted, homogeneized for 5 mins and

double pasteurized (85°C for 15 mins) cooled and stored. This served as a control peanut milk for other five processing methods.

2.3 Proximate Composition

Moisture, Fat, Protein, Crude fibre & Carbohydrate was analyzed by following the AOAC (2000) methods for local and CO 6 varieties of peanut.

2.4 Physiochemical Properties of Peanut Milk

Physiochemical properties of peanut milk was analyzed for pH of the sample was estimated by the method described by Buck et al., (2002).The total soluble solids of the samples were measured using a hand refractometer (0 to 32° Brix, Erma, Japan) (Ranganna 1986). The

viscosity of the peanut milk was analyzed at $25 \pm 0.1^\circ\text{C}$ using 1-1 coaxial cylinder Brooke field viscometer. (Bourne 1990), (DFT Tech, Chennai, Tamil Nadu). Color measurements (L^* a^* b^* values) of the peanut milk was determined using a Hunter chromometer with the Lovibond RT Color software (Version 3.0) (Pomeranz and Meloan 1994). Acidity of the samples was estimated by the method described by AOAC. (1990). Protein content of the peanut milk was estimated by kjeldhal method AOAC (1995), fat AOAC (2000) was done using standard procedure.

2.5 Sensory Evaluation

Local and CO 6 varieties of peanut was subjected into different processing methods like fresh, blanching, roasting, soaking, germination methods and peanut milk was extracted analyzed its Sensory attributes (i.e. color & appearance, flavour, consistency, taste and overall acceptability) by a semi-trained panel consisting of fifteen members using a nine point hedonic scale.

3. RESULTS AND DISCUSSION

The present investigation was done with an objective to observe the effect of different processing method on the extraction of peanut milk and analyses its sensory and physicochemical composition of peanut milk.

3.1 Proximate Analysis of Local Variety and CO 6 Variety of Peanuts

The proximate analysis of Local variety and CO 6 variety of peanuts was carried out in the laboratory of Community science college & research institute, Madurai. The proximate composition of peanut consists of carbohydrates, protein, fat, fiber, moisture content.

Table 5 shows the result of carbohydrates, protein, fat, moisture content was high in CO 6

peanut variety and its value was 26.7 (g/100g), 27.8 (g/100g), 38(g/100g) when compared to local variety and its value was 25.2 (g/100g), 24.7 (g/100g), 39(g/100g) respectively. Satish Ingale et al. [12] reported nutritional, anti-nutritional value, proximate composition of JL-24 peanut variety. Result showed that this variety of peanut contains carbohydrates, crude protein, crude fiber, lipid values of 21.26%, 25.20%, 1.149%, 46.224% respectively. Dietary guidelines for Americans (2015) reported that fiber content in peanuts helps to meet the dietary requirement of fiber for individuals. Hundred grams peanut gives nearly 8.5 g of fiber.

Yadav et al. [13] reported that raw peanuts proximate composition like moisture, protein, carbohydrate was analyzed and its value was 5.25% (wb), (25.48%), 17.43% respectively.

3.2 Sensory Evaluation of Peanut Milk by Different Processing Methods in Local Variety of Peanut

Table 6 shows the average scores of different sensory attributes of local variety of peanut milk by different processing methods like fresh, blanching, roasting, soaking & germination. This table results showed that there was a difference occurs in the colour, appearance, flavor, consistency, taste, overall acceptability in fresh, blanching, roasting, soaking, & germination methods.

Peanut milk was prepared by fresh peanut local variety without any treatments and it was considered as a control peanut milk. The fresh peanut milk had strong peanutbeany flavor & taste and its consistency was thin, colour and appearance of peanut milk was white, its overall acceptability was moderately acceptable when compared to other treatments prepared peanut milk. Mohamed Ismail Abou-Dobara et al. [14] reported that compared to cow's milk, peanut milk had less acceptable colour and appearance of the peanut milk which is due to light brown

Table 5. Proximate composition of local variety & CO 6 variety of peanut

Parameters	Local variety	CO 6 variety
Carbohydrates (g/100g)	25.2±0.65 ^c	26.7±0.69 ^c
Protein (g/100g)	24.7±0.75 ^c	27.8±0.11 ^d
Fat (g/100g)	39±0.13 ^d	38±0.49 ^e
Fiber (g/100g)	7.9±0.05 ^b	8.2±0.07 ^b
Moisture (%)	6.1±0.13 ^a	5.8±0.03 ^a

Values are means of 4 replicates. Means in the same column followed by different superscripts are significantly different at $P < 0.05$

Table 6. Sensory properties of Local variety peanut milk by different processing methods

Treatments	Quality attributes				
	Colour & Appearance	Flavour	Consistency	Taste	Overall acceptability
Fresh (control)	7	6	6	5	7
Blanching					
B1	7	8	7	7	6
B2	8	8	8	9	9
B3	8	7	8	8	8
B4	7	7	8	7	7
Roasting					
R1	8	7	7	8	7
R2	8	9	9	9	9
Soaking					
S1	7	6	5	7	6
S2	8	8	7	8	8
S3	6	7	8	7	7
S4	7	6	8	5	7
Germination					
G1	7	6	6	7	7
G2	8	7	7	6	6
G3	6	7	7	6	6

colour of the peanut and also smell, taste, mouth feel also secured low sensory score when compared to cows milk which is due to beany flavor.

In blanching method the local variety of peanut was subjected into blanching for different time intervals B1(2mins), B2(3 mins),B3(5 mins), B4(7 mins). Table 6 shows the result among these different time intervals blanching B2 (2mins) had higher sensory acceptability compared to other time intervals. Colour and appearance of this peanut milk was white in nature, beany flavor of the milk was slightly reduced compared to other processing methods, it has slight watery consistency, it had good sensory acceptability. Parul Jain et al. [15] reported that the tried preparing peanut milk using pressure blanching at 121°C, 15 psi for 2, 3 and 5 min and found pressure blanching at 121°C, 15 psi for 3 min was the best treatment. Pressure blanching method was the most acceptable method for the peanut milk preparation. But its protein and total solid content was reduced.

In roasting method local variety of peanut subjected into two treatments R1(roasting for 5 mins) and R2 (roasting for 5 mins and soaking for 3 hrs) & peanut milk was prepared. Table 6 depicts the results. Among these two different treatments R2 had higher sensory score and it was considered as best treatment. Flavor and

taste of this milk has not strong beany flavor so it was most accepted peanut milk by the panel members. Colour &, appearance of this peanut milk was similar to cow's milk and secured highest sensory acceptability among different processing methods like fresh, blanching, roasting, soaking and germination. Ibraheem et al. [16] reported that roasting processing methods in peanut helps to remove the crust and also reduced the peany flavor in the peanut and also nutritional value also increased . H. Rizki1, et al. [17] reported that thermal processing like roasting and frying in peanuts would enhance the organoleptic characteristics of the peanut products.

In soaking method local variety of peanut subjected into four treatments S1(2 hrs soaking), S2 (3 hrs soaking), S3 (5 hrs soaking), S4 (7 hrs soaking) and peanut milk was prepared. Among these four different treatments in soaking method S2 (3 hrs soaking) was found to be the best treatment based on the sensory evaluation. Consistency of the milk was watery in nature and it had strong peanut flavor. Colour and appearance of this peanut milk was dull white in nature. Yadav et al. [13] reported that during soaking method for peanut milk preparation moisture content in the peanut milk was increased compared to raw peanuts.

In germination method local variety of peanut was subjected into three germination times G1(8

hrs germination), G2(12 hrs germination), G3(24 hrs germination) and peanut milk was prepared. Among the three different treatment of germination G1(8 hrs germination) had highest sensory score. Colour and appearance of this peanut milk was less sensory score, taste, flavor and overall acceptability of this peanut was very less sensory acceptability, because it had bitter taste and flavor. Ikemefuna C et al. [18] reported that germination and fermentation process influences the nutritional composition of peanut. During germination protein, carbohydrates was decreased and sugar content was increased.

3.3 Sensory Evaluation of Peanut Milk by Different Processing Methods in Co 6 Variety of Peanut

Table 7 shows the average scores of different sensory attributes of CO 6 variety peanut milk by different processing methods like fresh, blanching, roasting, soaking & germination. This table results showed that there was a difference occurs in the colour, appearance, flavor, consistency, taste, overall acceptability in fresh, blanching, roasting, soaking & germination methods.

Peanut milk was prepared by fresh peanut CO 6 variety without given any treatments and it was considered as a control peanut milk. Table 7 shows the result fresh peanut milk had very strong peanut flavor & taste, and its consistency was thick, colour and appearance of peanut milk was off white, its overall acceptability was less due to strong beany flavour when compared to other treatments prepared peanut milk.

In blanching method the CO 6 variety of peanut was subjected into blanching for different time intervals B1(2mins), B2(3 mins), B3(5 mins), B4(7 mins). Table 7 shows the result among these different time intervals blanching B1 (2mins) was most acceptable by the sensory panel members compared to other time in travels. Flavour and taste of this peanut milk was moderate level. Colour and appearance of this peanut milk was white in nature, consistency of the peanut milk was slight thin in nature when compared to cowsmilk. Overall acceptability of this milk was good. Rubico et al. [19] examined that peanut beverages were processed at 85, 100 and 121°C for 5, 15, 25 mins its organoleptic characteristics was analyzed by using ANOVA (Analysis of variance). Color, flavor, odour, viscosity characteristics of the peanut beverage

was influenced by temperature differences. among these processing temperature 100°C had best sensory score and increased creamy flavor compared to other processing temperature prepared peanut beverages.

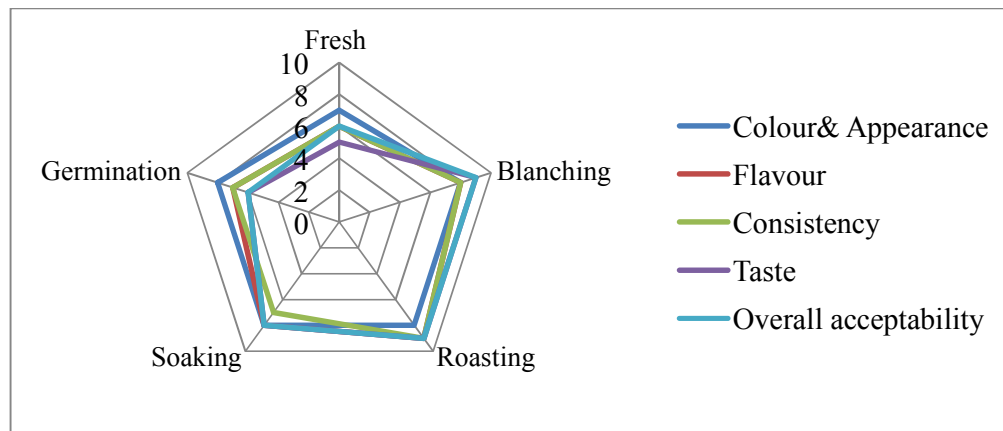
In roasting method CO 6 variety of peanut subjected into two treatments R1(roasting for 5 mins) and R2 (roasting for 5 mins and soaking for 3 hrs) & peanut milk was prepared. Table 7 shows the result among these two different treatments R2 had higher sensory score by nine point hedonic scale rating by sensory panel members. Colour appearance, taste, flavor this peanut milk had higher sensory acceptability. Consistency of the peanut milk was similar to cows milk. This method was the best processing method for peanut milk preparation when compared to other processing methods for preparation of peanut milk. Ghazzawi et al. [20] rawness of nuts can be reduced by roasting and frying and chemical changes also occurred. Saleem-ur-Rehman et al. [21] reported that dry roasted, fried and boiled peanuts are excellent for peanut milk preparation it can be used as a suitable alternative for cows milk.

In soaking method CO 6 variety of peanut subjected into four treatments included S1(2 hrs soaking), S2 (3 hrs soaking), S3 (5 hrs soaking), S4 (7 hrs soaking) and peanut milk was prepared. Table 7 shows the result indicated among these four different treatments in soaking method S2(3 hrs soaking) was the best based on the sensory score. Colour and appearance of this peanut milk was dull white in nature. Consistency of the milk was watery in nature and it had strong peanut flavor. It has moderate overall acceptability. Chan lee et al. [22] reported that peanuts were soaked in 1.0% NaHCO₃ resulted in a light coloured peanut milk and enhances the lightness during soaking.

In germination method CO 6 variety of peanut was subjected into three treatment G1(8 hrs germination), G2(12 hrs germination), G3 (24 hrs germination) and peanut milk was prepared. Table 6 shows the result among these three different treatment of germination G1(8 hrs germination) had acceptable sensory score. Colour and appearance of this peanut milk was least sensory score, taste, flavor and overall acceptability of this peanut was very less sensory acceptability, because it had bitter taste and flavor. John Off em et al. [23] reported that germination of groundnut seeds increased the lipid and fatty acid content.

Table 7. Sensory properties of CO 6 variety peanut milk by different processing methods

Treatments	Quality attributes				
	Colour & Appearance	Flavour	Consistency	Taste	Overall acceptability
Fresh (control)	7	6	6	5	7
Blanching					
B1	8	8	7	8	8
B2	7	6	7	8	7
B3	7	6	8	7	7
B4	8	7	8	8	7
Roasting					
R1	8	8	7	9	8
R2	8	9	9	9	9
Soaking					
S1	7	6	7	8	7
S2	8	7	8	7	8
S3	8	6	7	6	7
S4	7	6	8	8	7
Germination					
G1	6	6	6	7	5
G2	7	6	6	6	6
G3	7	6	6	7	6

**Fig. 2. Sensory evaluation of local variety peanut milk by different processing methods**

3.4 Comparison of Different Processing Methods of Prepared Peanut Milk in Both Local Variety and Co 6 Peanut Varieties Based on Sensory Evaluation

Table 8 shows the result of average scores of different sensory attributes of the different processing methods like fresh, blanching, soaking, roasting and germination methods prepared peanut milk in both the local and CO 6 variety of peanuts. Sensory evaluation of these peanut milk was done by nine point hedonic rating scale among fifteen sensory panel

members. Organoleptic characteristics of peanut milk was analyzed in five different processing methods in both the varieties. The result was similar in both the local and CO 6 varieties of peanut. Among these five different processing methods roasting method had highest sensory score, and it had highest acceptability because of taste and flavor, colour, appearance and consistency of the milk was similar to cow's milk. Second best processing method was soaking method, followed by blanching, fresh, germination method. Germination method had least sensory acceptability due to strong beany and bitter taste and flavor.

Table 8. Sensory properties of both local and CO 6 variety

Parameters	Local variety					CO 6 variety				
	Fresh	Blanching	Roasting	Soaking	Germination	Fresh	Blanching	Roasting	Soaking	Germination
Colour& Appearance	7	8	8	8	8	7	8	8	8	7
Flavour	6	8	9	8	7	6	8	9	7	6
Consistency	6	8	9	7	7	6	7	9	8	6
Taste	5	9	9	8	6	5	8	9	7	7
Overall acceptability	6	9	9	8	6	7	8	9	8	6

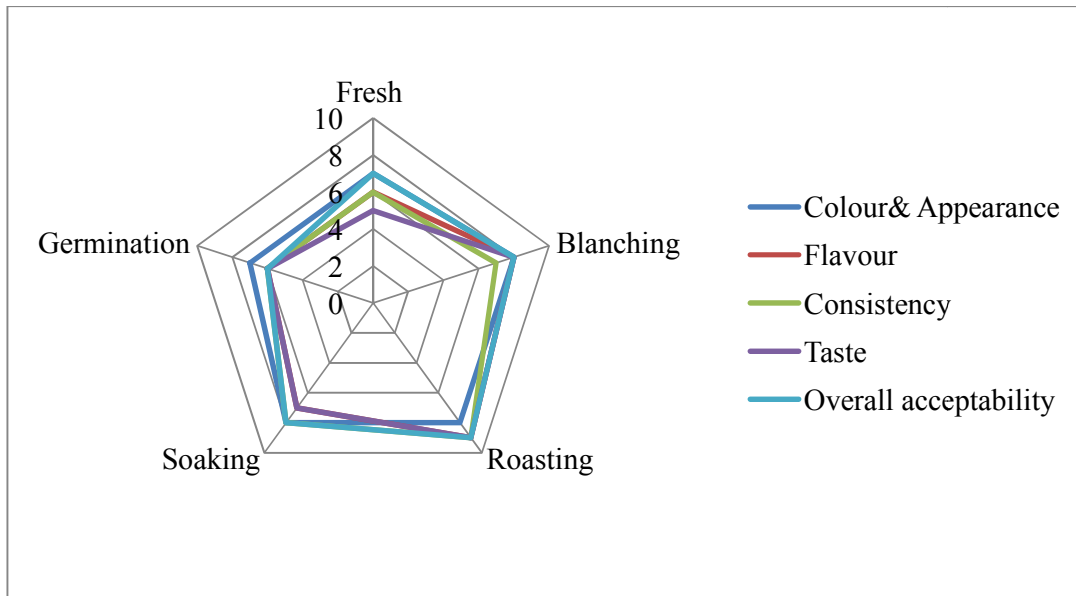


Fig. 3. Sensory evaluation of CO 6 variety peanut milk by different processing methods

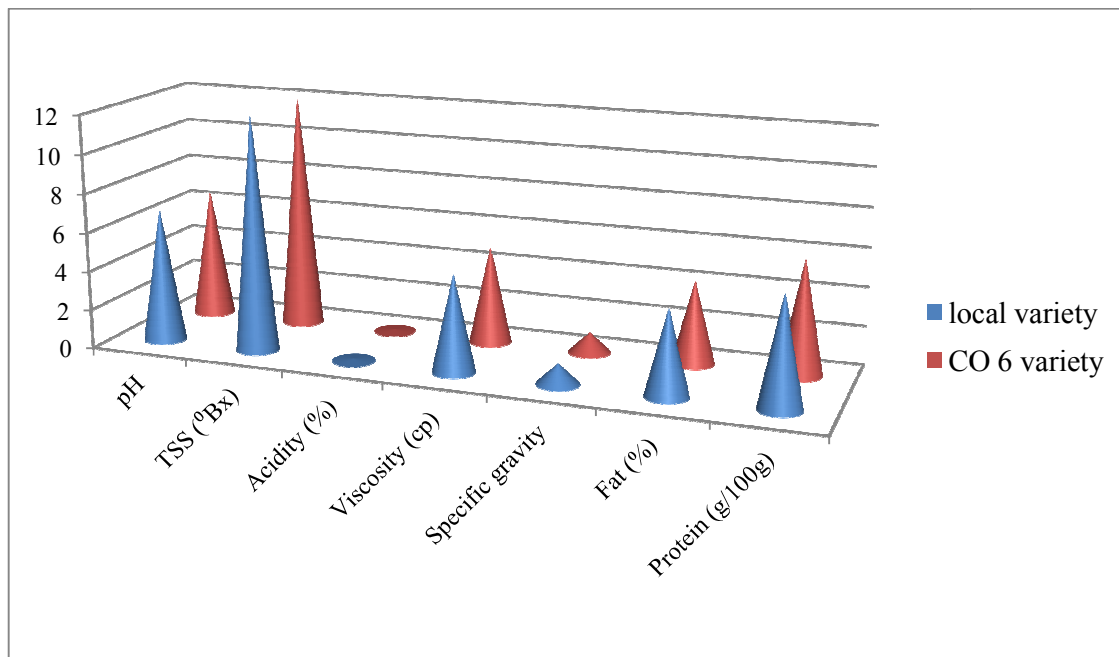


Fig. 4. Physiochemical properties of local & CO 6 variety peanut milk

Based on sensory score the acceptance of pretreatments for preparing peanut milk was as follows:

Roasting > Soaking > Blanching > Fresh > Germination

The present study report was in accordance with the study Yadav et al. [13] reported that based on the proximate compositional analysis roasting

method of peanut improves the quality of the peanut milk compared to soaking and raw peanuts. Adeiye et al. [24] reported that the peanut milk was prepared by groundnut milk extract by fresh, roasted (170°C, 25 min) and steeped (water, 20 min) groundnuts. Among these different processing methods there was significant difference occurs in colour, appearance and flavor of the peanut milk.

Table 9. Physiochemical properties of peanut milk–roasting method

Physiochemical properties	Local variety	CO 6 variety
pH	6.8±0.11 ^f	6.6±0.19 ^c
TSS (□Bx)	12±0.39 ^g	12±0.16 ^d
Acidity (%)	0.09±0.002 ^a	0.08±0.0007 ^a
Viscosity (cp)	4.92±0.07 ^d	4.98±0.15 ^d
Specific gravity	1.030±0.02 ^b	1.031±0.01 ^a
Fat (%)	4.3±0.14 ^c	4.2±0.051 ^d
Protein (g/100g)	5.6±0.08 ^e	5.8±0.165 ^d
Colour values		
	L 77.36	82.09
	a 0.93	0.96
	b 13.62	13.43

Values are means of 4 replicates. Means in the same column followed by different superscripts are significantly different at $P < 0.05$

3.5 Physiochemical Properties of Peanut Milk

Peanut milk was prepared by five different processing methods in both local and CO 6 variety of peanut. Among the five different processing methods roasting method was found to most suitable for making peanut milk. Table 9 shows the result of physiochemical properties of peanut in both the local and CO 6 varieties. In local variety peanut milk was prepared and analyzed its physiochemical properties like pH, TSS, Acidity, viscosity, specific gravity, fat, protein and its value was 6.8, 12□Bx, 0.009%, 4.92 cp, 1.030, 4.2(%), 5.6 g/100g and colour value $L^* -77.36, a^* -0.93, b^* -13.62$ and also CO 6 variety peanut milk physiochemical properties like pH, TSS, Acidity, viscosity, specific gravity, fat, protein and its value was 6.6, 12□Bx, 0.009%, 4.98 cp, 1.031, 4.3(%), 5.8 (g/100g) and colour value $L^* -82.09, a^* -0.96, b^* -13.43$. Based on the result showed that pH, TSS, specific gravity of peanut milk was similar to cow's milk in both the varieties of peanut, viscosity, acidity was similar in both the varieties of prepared peanut milk. Colour value was high in local variety prepared peanut milk when compared to CO 6 variety of prepared peanut milk. Yadachi et al. [25] reported the TSS, Acidity, viscosity, specific gravity of peanut milk was 6.9, 8.6□Bx, 0.24 %, 1.05 respectively. Albuquerque et al. [5] reported that peanut milk physiochemical properties like pH, Acidity, moisture and protein were analyzed and its value was 6.70, 0.30(%), 90(%), 2.46(%).

Total solids and protein contents of peanut milk were close to those of cow milk. On contrary, peanut milk was richer in fat but poorer in ash than cow milk [26].

4. CONCLUSION

Peanut milk was prepared using five different processing methods viz., fresh, soaking, blanching, roasting and germination for both of selected varieties of local and CO 6 peanut variety. In each processing method different treatments were done. Roasting method, R2 (roasting for 5mins and soaking for 3 hrs) was the best treatment, soaking method S2(3 hrs soaking) was the best method, germination G1(8 hrs germination represented great results in both the local varieties and CO 6 varieties. In blanching method B1 (2mins blanching) in local variety & B2(3 mins blanching) in CO 6 variety was the most recommended technique. Among the five processing methods in both the varieties of peanuts roasting method was the method based on the sensory score. Peanut milk does not contain any lactose so it can be more suitable for who have lactose intolerance and cows milk allergy.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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