

Biological Forum – An International Journal

14(3): 1052-1057(2022)

ISSN No. (Print): 0975-1130 ISSN No. (Online): 2249-3239

# Effect of Peanut Flour on Proximate Composition of Thabdi Peda

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ABSTRACT: *Peda* is a popular sweet in India. The demands for higher valued ceremony food, varieties of *Peda*, *viz.* plain, kesar, *Thabdi*, etc. are available in the market. But higher prices of animal milk-based fat products and the high sugar content of traditional Indian sweets lead to health problems like diabetes. It is imperative to study a solution for best suitable plant-based ingredients with highly valued protein with economically feasible. The incorporation of defatted peanut flour in *Thabdi Peda* can make it more profitable because of its by-products of oil industries. Response Surface Methodology was undertaken to determine the effect of various proportions of peanut flour and sugar content on composition of *Thabdi Peda*. For that two-factor five-level Central Composite Rotatable Design (CCRD) was used. The peanut flour with proportion of 17.04% per kg of buffalo milk weight was found to be best suitable for preparing the *Thabdi Peda*. This optimized treatment showed higher level of true protein content and lower level of sugar as compared to traditional *Thabdi Peda*. These several health benefits can attract consumers to buy products and overcome the malnutrition problem, too. The cost of peanut flour based *Thabdi Peda* was found to be 21.27% lesser than the traditional *Thabdi Peda*.

Keywords: Thabdi Peda, Peanut flour, Sugar, Optimization, Proximate composition.

### INTRODUCTION

*Peda* is one of the popular *khoa*-based sweetsin India. Nowadays, several varieties of *Peda*, *viz.* plain, kesar, *Thabdi*, etc. are available in the market. Amongst these, *ThabdiPeda* is more popular because of its characteristic caramel taste, texture and longer shelf life. *Thabdi Peda* is one such heat-desiccated indigenous milk sweet manufactured and sold in large quantities in Saurashtra region of Gujarat state (Patel *et al.*, 2012). Day by day popularity of *Thabdi Peda* is increasing in Gujarat as well as other states. The product resembles to Brown or *Lal Peda* in many aspects.

*Thabdi Peda* isa popular milk-based sweet with light to dark red in colour of the firm body and granular texture. It is prepared from *khoa*, obtained by scalding fresh milk in an open pan with addition of sugar in the required amount until the moisture content is reduced as well as desired granular, hard texture and flavour develops (Bandyopadhyay *et al.*, 2006; Chauhan and Dodeja 2019). Due to the high temperature, nutritional loss occurs in the *Thabdi Peda*. Therefore, it is necessary to supplement nutrition as food enrichment in *Thabdi Peda*. As per changes in demand and dietary patterns of consumers, researchers have been working to reduce calories of sweet products with artificial sweeteners or by any other applications (Rustom *et al.*, 1996; Gawande *et al.*, 2012) but enrichment of sweets with different natural products can serve healthy products to health-conscious people and overcome the malnutrition problem, too.

In India, peanut flour is used to make a variety of lowcost new food product formulations (Bassey *et al.*, 2013). The pleasant aroma, nutty flavour and smooth texture of roasted nuts have gained popularity. The earlier studies reported many health benefits of peanuts. Peanut is utilised to improve nutrients in traditional food products and to cure severe child malnutrition (Patel, 1996; Briend, 2001). Consumers in India are becoming more health conscious and looking for healthy food due to rising disposable income, education levels and nutritional understanding (Dhamsaniya *et al.*, 2012; Patil *et al.*, 2022). There is an opportunity to add peanut flour to *Thabdi Peda* to get a delicious and nutritionally enriched product (Bassey *et al.*, 2013).

Peanut flour after oil extraction has a very low market price. Incorporation of defatted peanut flour in *Thabdi Peda* would be beneficial to oil millers to get its better price which will make peanut processing more profitable. Therefore, it was felt interesting to incorporate peanut flour in making *Thabdi Peda* which would be better for people's health. The current study was undertaken to evaluate the effect of various proportions of peanut flour and sugar content on the proximate composition of *Thabdi Peda*.

#### MATERIALS AND METHODS

The pasteurised whole buffalo milk (7.5% fat) was obtained from the Cattle Breeding Farm of the Junagadh Agricultural University, Junagadh. Sugar (Madhur brand) was procured from the local market. Partially defatted peanut kernel splits of GG-20 obtained from the local market were used to get defatted peanut flour. As suggested by Dhamsaniya et al. (2012), the peanut kernel splits were roasted in a tray drier at 130°C for 60 minutes (Macro Scientific Works PVT. LTD., Model: MSW-214). Split roasted peanut kernels were allowed to cool to room temperature before being ground in a mixer grinder (Bajaj Electricals Limited, Model: FX11 600 Watts Food Processor). After grinding the split, sieving was done to get the roasted partially defatted peanut flour using a 22 mesh sieve size (RPDPF).

The proportion of sugar and peanut flour varied in the range of 6-10 and 5-20% on the weight basis of milk, respectively. To evaluate the effect of varying levels of sugar  $(X_1)$  and peanut flour  $(X_2)$  on various proximate constituents of *Thabdi Peda*; a two-factor, five-level Central Composite Rotatable Design (CCRD) of Response Surface Methodology (RSM) with a quadratic model was employed to design various experiments.

Peda Preparation. Following the conventional process advised by Modha et al. (2015), the Thabdi Peda were prepared with varied proportions of sugar and peanut flour. For Peda making, the milk was brought in a stainless steel open pan. To condense, milk was heated in the pan. After first boiling, sugar (6-10% w/w of milk) was added at the temperature of 97+2°C and stirring was done by SS palta. The concentration procedure was carried out until the pre-pat forming phase. At this point, the gas flame was set to a low to avoid burning. Until the milk was coagulated and transformed into the granular mass, the whole mass was left undisturbed for a while in the pan. To achieve the ideal texture and development of distinctive colour, the heating process was prolonged with a low flame. It was, then, allowed to cool atroom temperature. To obtain a homogenised product, the concentrate was mixed with the peanut flour (5-20% w/w of milk) at a temperature of around 50+2°C. After thoroughly mixing, it was allowed to cool at room temperature followed by manually forming the Peda.

Determination of Proximate Composition. The proximate composition viz., moisture content, fat content, true protein content, sucrose, lactose and total carbohydrate of peanut flour based Thabdi Peda were determined using the standard methods and procedures. The moisture content (wet basis) of peanut flour based Thabdi Peda was determined by the hot air oven method as described by AOAC (2000). The fat content of prepared Peda was determined by the Soxhlet apparatus method (AOAC, 2000) using SOCS PLUS (Model: SCS 06 AS DLS). True protein and total carbohydrate content were estimated as per the method suggested by Sadasivam and Manickam (1996). Sucrose and lactose were estimated as per the procedure described by Kondiba (2006)with certain modifications.

**Statistical Analysis.** Response Surface Methodology (RSM) was used to estimate the effect of sugar and peanut flour on various proximate composition of *Thabdi Peda*. The response surface curves for the individual response parameters were developed through Design Expert (11.1.2.0) (Myers and Montgomery, 2000). The multiple regression analysis of data obtained from various experiments was carried out to evaluate the effect of varying levels of ingredients on the proximate composition of *Peda*.

## **RESULTS AND DISCUSSION**

The different combinations of peanut flour and sugar content in *Thabdi Peda* were subjected to evaluate their effect on various proximate composition *viz.*, moisture content, fat content, true protein content, sucrose, lactose and total carbohydrateas shown in Table 1. Analysis of variance (ANOVA) and regression coefficients for response surface quadratic model of different proximate composition of peanut flour based *Thabdi Peda* is given in Table 2.

Effect on Moisture Content of *Peda*. The moisture content of peanut flour based *Thabdi Peda* was obtained in the range of 15.06 to 17.38% depending upon the varying proportion of sugar and peanut flour as given in Table 1. It was found that the increase in the proportion of peanut flour extremely reduced the moisture content of the *Peda* (p<0.001). The effect of sugar and combined effect of sugar and peanut flour was found non-significant. Also, both quadratic terms were non-significant (Table 2).

The empirical relationship between the test variables with moisture content of *Peda* was obtained as under:

Moisture content (%, wb) =  $16.39+0.1075 X_1-0.8151X_2+0.0150X_1X_2-0.0952X_1^2-0.0752X_2^2$ 

Where,  $X_1$  and  $X_2$  are the sugar and peanut flour proportion, respectively.

The response surface curve for the variation in the moisture content of peanut flour based Thabdi Peda as a function of sugar  $(X_1)$  and peanut flour  $(X_2)$  is shown in Fig. 1(a). It shows that the decrease in moisture content was observed as the sugar decreased up to 6% and peanut flour increased up to 20%. The moisture content in this combination was proposed to be decreased up to 14.72%. The addition of peanut flour in the Thabdi Peda led to decrease in the moisture with increasing in the flour level. It might be possible due to the lower initial moisture content of peanut flour. A similar trend was noted by Gavhane et al. (2014) while the manufacturing of ginger based Peda. Labuckas et al. (2016) also observed reduction in moisture content with an increase in peanut flour proportion while improving nutritional value of bakery products. The present findings are, therefore, in agreement with the results of other scientists.

Effect on Fat Content of *Peda*. The fat content was got in the range of 15.89 to 19.74% depending on varying proportion of sugar and peanut flour as given in Table 1. The lowest fat content was found in the *Peda* having 5% peanut flour while the highest fat was recorded in the *Peda* having the highest peanut flour (20%) content. This shows an extremely significant

effect of peanut flour (p<0.001) on the fat content of *Peda*. However, the interaction effect of both the ingredients and sugar alone remained non-significant. The empirical relationship for fat content was obtained as under:

Fat content (%) =  $18.47-0.0145X_1+1.24X_2-0.1750X_1X_2-0.2907X_1^2-0.3357X_2^2$ 

Where,  $X_1$  and  $X_2$  are the coded factors of sugar and peanut flour, respectively.

Table 1: Experiment values of different proximate composition of peanut flour based Thabdi Peda.

	Independent variable		Responses					
Experimental Runs	Sugar (%)	Peanut flour (%)	Moisture content (%)	Fat content (%)	True protein (%)	Sucrose (%)	Lactose (%)	Total carbohydrate (%)
1	8.00	12.50	16.02	17.91	20.06	29.88	9.63	44.89
2	8.00	5.00	17.38	15.89	17.80	32.16	11.2	48.61
3	9.41	17.80	15.45	18.71	21.07	33.39	8.66	47.46
4	8.00	12.50	16.22	18.02	20.15	30.01	9.69	45.08
5	6.00	12.50	15.89	17.84	20.74	27.45	9.94	42.77
6	9.41	7.20	17.04	16.81	18.76	35.12	9.68	50.12
7	10.00	12.50	16.47	17.97	19.88	34.32	9.35	47.05
8	8.00	20.00	15.06	19.74	21.81	29.57	8.45	43.59
9	8.00	12.50	16.76	18.68	20.51	30.44	9.51	45.33
10	6.59	17.80	15.40	19.21	20.83	27.37	9.07	41.91
11	8.00	12.50	16.51	18.83	20.59	31.5	9.54	45.92
12	8.00	12.50	16.43	18.93	20.68	31.28	9.81	46.47
13	6.59	7.20	17.05	16.61	19.31	27.56	10.73	43.58

The increase in fat content was observed as the sugar decreased up to 7.37% and peanut flour increased up to 20% as indicated in Fig. 1(b). The fat content in this combination was proposed to be increased up to 19.62%. Upon further rise in peanut flour, fat content was found to be increased. Shinde *et al.* (2015) also examined the increase in fat content of *Peda* blended with wheat bran. Similar findings were also reported by Dharsenda *et al.* (2015) during their experiment on peanut okara (defatted peanut) flour cookies.

Effect on True Protein Contentof *Peda*. The true protein content of *Peda* varied between 17.80 and 21.81% during the different treatment combinations (Table 1). The linear and quadratic effect of peanut flour was found to be extremely significant (p<0.001) and significant (p<0.05), respectively. While the linear and quadratic effect of sugar and the interaction effect of sugar and peanut flour was observed as non-significant (Table 2). The empirical relationship for true protein was obtained as under:

True protein (%) = 20.40 - 0.1908 X<sub>1</sub> + 1.19 X<sub>2</sub> + 0.1975 X<sub>1</sub>X<sub>2</sub> - 0.0602 X<sub>1</sub><sup>2</sup> - 0.3127 X<sub>2</sub><sup>2</sup>

Where,  $X_1$  and  $X_2$  are the coded factors of sugar and peanut flour, respectively.

Fig. 1(c) shows the interactive effect of sugar and peanut flour on the true protein of peanut flour based *Thabdi Peda*. The increase in true protein was observed as the sugar increased up to 8.82% and peanut flour up to 20%. The true protein in this combination was proposed to be increased up to 21.48%. The value of true protein was increased with increase in the proportion of peanut flour. It might be occurred due to the high value of protein available in the peanut flour. The same trend was also seen by Seth and Kochhar (2018) while developing healthy cakes using partially defatted peanut flour.

**Effect on Sucrose of** *Peda.* The experimental values of sucrose were found in the range of 27.37 to 35.12% depending on different treatment combinations (Table 1). The linear effect of sugar and peanut flour indicated

a significant positive effect on sucrose at the level of significance p<0.001 and p<0.01, respectively. The empirical relation for the sucrose of peanut flour based *Thabdi Peda* was obtained as under:

Sucrose (%) = 30.62 + 2.91 X<sub>1</sub> – 0.6979 X<sub>2</sub> – 0.3850 X<sub>1</sub>X<sub>2</sub> + 0.1278 X<sub>1</sub><sup>2</sup> + 0.1178 X<sub>2</sub><sup>2</sup>

Where,  $X_1$  and  $X_2$  are the coded factors of sugar and peanut flour, respectively.

The increase in sucrose was observed as the sugar increased up to 10% and peanut flour up to 5% as indicated in the Fig. 1(d). The sucrose at this combination was proposed to be increased up to 36.96%. It was observed that the sucrose was increased with an increase in sugar level. During their investigation into the rate of sugar addition in *Thabdi*, Hirpara *et al.* (2015) obtained a similar set of results. At the same time, sucrose decreased as the level of peanut flour increased. It might be possible due to the reduction of weight of sugarin the total weight of peanut flour based *Thabdi Peda*.

Effect on Lactose of *Peda*. The lactose of peanut flour based *Thabdi Peda* was obtained in the range of 8.45 to 11.20% depending upon the varying proportion of sugar and peanut flour as given in Table 1. The linear effect of sugar and peanut flour indicated a negatively significant effect on lactose at the level of significance p<0.01 and p<0.001, respectively. The empirical relation for the lactose of peanut flour based *Thabdi Peda* was obtained as under:

Lactose (%) = 9.64 - 0.2868 X<sub>1</sub> - 0.8211 X<sub>2</sub> + 0.1600 X<sub>1</sub>X<sub>2</sub> - 0.0455 X<sub>1</sub><sup>2</sup> + 0.0445 X<sub>2</sub><sup>2</sup>

Where,  $X_1$  and  $X_2$  are the coded factors of sugar and peanut flour, respectively.

The decrease in lactose was observed as the sugar increased up to 10% and peanut flour up to 20% as indicated in the Fig. 1(e). The lactose at this combination was observed to be decreased up to 8.39%. The lactose was decreased with increase in sugar level and peanut flour level. The effect of sugar on decrease in lactose content was also found by Hirpara *et al.* 

(2015) during the optimization of sugar rate in *Thabdi*. Reduction in lactose with the addition of peanut flour can be concluded as the lower level of lactose in the gross product.

Effect on Total Carbohydrate of *Peda*. The total carbohydrate of *Thabdi Peda* was obtained in the range of 41.91 to 50.12% depending upon the level of sugar and peanut flour as given in Table 1. The linear effect of sugar and peanut flour were indicated highly significant on total carbohydrate at the level of significance of 0.1% and 1%, respectively. The empirical relation for the total carbohydrate of peanut flour based *Thabdi Peda* was obtained as under:

Total carbohydrate (%) =  $45.54 + 2.27 X_1 - 1.43 X_2 - 0.2475 X_1 X_2 - 0.2484 X_1^2 + 0.3466 X_2^2$ 

Where,  $X_1$  and  $X_2$  are the coded factors of sugar and peanut flour, respectively.

The decrease in total carbohydrate was observed when the sugar decreased up to 6% and peanut flour increased up to 20% as presented in the Fig. 1(f). The total carbohydrate at this combination was decreased up to 41.01%. The decrease in total carbohydrate was observed with the reduction in sugar quantity. Hirpara *et al.* (2015) have also mentioned similar findings during *Thabdi* making process. Also, total carbohydrate was decreased with increase in peanut flour proportion. This might be due to the total carbohydrate available in peanut flour, which was used as the raw material of peanut flour based *Thabdi Peda*. Shinde *et al.* (2015) have found out decrease in carbohydrate of *Peda* with increase in wheat bran. A similar result was also mentioned by Dhanesh *et al.* (2018) while improving nutritional quality of Indian seasonal sweets with partially defatted peanut cake flour and dehydrated spinach leaves powder.

The proximate composition *Thabdi Peda* prepared at optimized proportion of peanut flour (17.04%) and sugar content (10%) was compared with the traditional *Thabdi Peda* as shown in Table 3. It was interesting to note that the addition of peanut flour in the *Thabdi Peda* significantly increased true protein (42.86%) content of the *Peda*. Also, the manufacturing cost of peanut flour based *Thabdi Peda* will be 21.27% lesser than the traditional *Thabdi Peda*.

 Table 2: Analysis of variance (ANOVA) and regression coefficients for response surface quadratic model of different proximate composition of peanut flour based *Thabdi Peda*.

Source	Moisture content (%)	Fat content (%)	True Protein (%)	Sucrose (%)	Lactose (%)	Total carbohydrate (%)	
Intercept	16.39	18.47	20.40	30.62	9.64	45.54	
Linear terms							
Sugar (X1)	0.1075 <sup>NS</sup>	-0.0145 <sup>NS</sup>	-0.1908 <sup>NS</sup>	2.91***	-0.2868**	2.27***	
Peanut flour (X <sub>2</sub> )	-0.8151***	1.24***	1.19***	-0.6979*	-0.8211***	-1.43**	
Interaction terms							
$X_1X_2$	0.0150 <sup>NS</sup>	-0.1750 <sup>NS</sup>	0.1975 <sup>NS</sup>	-0.3850 <sup>NS</sup>	0.1600 <sup>NS</sup>	-0.2475 <sup>NS</sup>	
Quadratic terms							
X1 <sup>2</sup>	-0.0952 <sup>NS</sup>	-0.2907 <sup>NS</sup>	-0.0602 <sup>NS</sup>	0.1278 <sup>NS</sup>	-0.0455 <sup>NS</sup>	-0.2484 <sup>NS</sup>	
$X_2^2$	-0.0752 <sup>NS</sup>	-0.3357 <sup>NS</sup>	-0.3127*	0.1178 <sup>NS</sup>	0.0445 <sup>NS</sup>	0.3466 <sup>NS</sup>	
Indicators for model fitting							
$\mathbb{R}^2$	0.9326	0.9292	0.9367	0.9427	0.9436	0.8896	
Adj-R <sup>2</sup>	0.8845	0.8787	0.8914	0.9017	0.9033	0.8108	
Pred-R <sup>2</sup>	0.8206	0.8360	0.6772	0.7484	0.6481	0.3560	
Adeq Precision	14.2422	13.4050	14.2782	15.2761	14.9769	11.1351	
F-value	19.37	18.39	20.70	23.03	23.41	11.29	
Lack of fit	NS	NS	NS	NS	7.13	NS	
C.V. %	1.46	2.13	1.72	2.58	2.39	2.25	

\*\*\*Extremely significant at p<0.001, \*\*Highly significant at p<0.01, \*Significant at p<0.05, NS = Non-significant

# Table 3: Comparison of proximate composition in peanut flour based Thabdi Peda with traditional Thabdi Peda.

Sr. No.	Composition	Peanut flour based <i>Thabdi</i> <i>Peda</i>	Traditional <i>Thabdi</i> <i>Peda</i>	Deviation (%)
1.	Moisture content (%)	15.79	18.16	-13.05
2.	Fat content (%)	16.45	15.46	6.40
3.	True Protein (%)	21.20	14.84	42.86
4.	Sucrose (%)	33.87	36.79	-7.94
5.	Lactose (%)	9.02	12.46	-27.61
6.	Total carbohydrate (%)	46.58	53.65	-13.18



Fig. 1. Effect of peanut flour and sugar content on proximate composition of peanut flour based Thabdi Peda.

## CONCLUSION

It was concluded that the peanut flour could be successfully added at 17.04% of milk weight in preparing the *Thabdi Peda* for getting the better proximate composition of the *Peda*. At this level, 10% sugar is to be added in the *Peda*. At the optimized level of peanut flour, the true protein content of *Thabdi Peda* was increased by 42.86% as compared to traditional *Thabdi Peda*.

# FUTURE SCOPE

Peanut flour after oil extraction can be utilized to develop highly nutritive food products. This type of research will help to promote nutritious sweet products which provide taste with health benefits. Acknowledgement. The Department of Processing and Food Engineering, College of Agricultural Engineering and Technology, Junagadh Agricultural University, Junagadh (Gujarat, India), provided the authors with the resources necessary to conduct various experiments and make use of their laboratory facilities. The authors gratefully acknowledge this support.

Conflict of Interest. None.

### REFERENCES

- AOAC (2000). Official methods of analysis, 17<sup>th</sup> edn. Association of Official Analytical Chemists Washington, USA.
- Bandyopadhyay, M., Mukherjee, R. S., Chakraborty, R. and Raychaudhuri, U. (2006). A survey on formulations and process techniques of some special Indian traditional sweets and herbal sweets. *Indian Dairyman*, 58: 23-35.

- Bassey, F. I., McWatters, K. H., Edem, C. A. and Iwegbur, C. M. A. (2013). Formulation and nutritional evaluation of weaning food processed from cooking banana and supplementation with cowpea and peanut. *Food Science* and Nutrition, 1(5): 384-391.
- Briend, A. (2001). Highly nutrient-dense spreads: a new approach to delivering multiple micronutrients to highrisk groups. *British Journal of Nutrition*, 85(S2): 175-179.
- Chauhan, I. A. and Dodeja, A. K. (2019). Performance evaluation of three-stage SSHE for continuous manufacturing of burfi. Asian Journal of Dairy and Food Research, 38(3):178-185
- Dhamsaniya, N. K., Patel, N. C. and Dabhi, M. N. (2012). Selection of groundnut variety for making a good quality peanut butter. *Journal of Food Science and Technology*, 49(1): 115-118.
- Dhanesh, B. T., Kochhar, A. and Javed, M. (2018). Effect of Supplementation of Partially Defatted Peanut Cake Flour and Dehydrated Spinach Leaves Powder on the Nutritional Quality of Indian Seasonal Sweets. *International Journal of Current Microbiology and Applied Sciences*, 7(3): 384-392.
- Dharsenda, T., Dabhi, M., Jethva, M. and Kapopara, M. (2015). Nutritional and Functional Characterization of Peanut Okara (Defatted Peanut) Flour Cookies. *Journal* of Grain Processing and Storage, 2(2): 24-28.
- Gavhane, M. S., Kamble, N. S., Desale, R. J., Ghule, B. K. and Mule, P. R. (2014). Studies on preparation of peda with ginger powder. *International Journal of Food, Agriculture and Veterinary Sciences*, 4(2): 64-68.
- Gawande, H., Shendurse, A. and Dhotre, A. (2012). Low calorie traditional milk sweets in India: A review. *Indian Food Industry*, 31(2): 43-51.
- Hirpara, K. B., Patel, H. G. and Prajapati, J. P. (2015). Standardization of rate of sugar addition for the manufacture of *Thabdi. Journal of food science and technology*, 52(2): 1152-1157.
- Kondiba, L. G. (2006). Development of a process for manufacture and shelf life extension of brown peda.

Ph.D. (Dairy Technology) Thesis (Unpublished). National Dairy Research Institute, Karnal.

- Labuckas, D. O., Lamarque, A. L. and Maestri, D. (2016). Partially defatted peanut flour: A functional ingredient to improve nutritional value of bakery products. *Revista Chilena de Nutricion*, 43(4): 381-387.
- Modha, H. M., Patel, N. M., Patel, H. G. and Patel, K. N. (2015). Process standardization for the manufacture of *Thabdi Peda. Journal of Food Science and Technology*, 52(6): 3283-3290.
- Myers, R. H. and Montgomery, D. C. (2000). Response surface methodology process and product optimization using design experiments. 2<sup>nd</sup> Edn. John Wiely and Sons Inc, USA, pp 321-342.
- Patel, H. A. (1996). Comparative appraisal of quality of peda manufactured and sold in selected cities of Gujarat state.
  M. Sc. (Dairy Technology) Thesis (Unpublished). Gujarat Agricultural University, Anand, Gujarat.
- Patel, K. N., Patel, H. G., Prajapati, J. P. and Prajapati, P. S. (2012). Characterization of market Thabdi. *Indian Journal of Dairy Science*, 65(2): 122-128.
- Patil, S. P., Narwade, S. G., Londhe, G. K. and Patil, R. A. (2022). Effect of Sensory Properties, Shelf Life and Cost of Production on Black Gram (*Vigna mungo*) Flour Burfi. Asian Journal of Dairy and Food Research, 41(2): 231-236.
- Rustom, I. Y. S., Lopez-Leiva, M. H. and Nair, B. M. (1996). Nutritional, sensory and physicochemical properties of peanut beverage sterilized under two different UHT conditions. *Food Chemistry*, 56(1): 45-53.
- Sadasivam, S. and Manickam, A. (1996). Biochemical Methods for Agriculture Sciences, Willey Eastern Limited, New Delhi.
- Seth, K. and Kochhar, A. (2018). Nutritional Assessment of Healthy Cakes Developed Using Partially Defatted Peanut Flour. *Chemical Science Review and Letters*, 7(25): 244-249.
- Shinde, A. T., Lingayat, N. T., Jadhav, B. A. and Korake, R. L. (2015). Effect of wheat bran on chemical composition and textural profile of Peda. Asian Journal of Dairy and Food Research, 34(3): 193-197.

**How to cite this article:** V.M. Sejani, N.K. Dhamsaniya and P.J. Rathod (2022). Effect of Peanut Flour on Proximate Composition of *Thabdi Peda*. *Biological Forum – An International Journal*, *14*(3): 1052-1057.