

Development and quality evaluation of functional shrikhand

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ABSTRACT

Functional shrikhand varieties such as low calorie and low fat shrikhand were developed by incorporation of stevia as low calorie sweetener and when protein concentrate as a fat replacer respectively. Low calorie shrikhand was prepared by incorporating stevia at different levels [0.025% (T1), 0.05% (T2) and 0.1% (T3)]. Shrikhand samples were evaluated based on physicochemical, microbiological and sensory qualities. There was no significant difference in titratable acidity and ash content but the total solids and protein content were significantly lower in low calorie shrikhand. The yeast and mould count increased and coliform count decreased during storage. The sensory quality of low calorie shrikhand was comparable to control. Low fat shrikhand samples were prepared by using WPC at three different levels [1(T1), 1.5(T2) and 2(T3) per cent]. Control shrikhand was prepared from skim milk without the addition of WPC. There was no significant difference in ash content. But there was a significant difference in acidity, total solids, protein and fat content between control and treatment samples. The yeast and mould count increased during storage but coliform count decreased during storage. The sensory quality of low fat shrikhand was similar to that of control.

Key words: Shrikhand, whey protein concentrate, fat replacer, stevia

INTRODUCTION

Shrikhand is a popular indigenous fermented milk product. It is popular in Gujarat, Maharashtra and certain parts of Karnataka and Madhya Pradesh. It is prepared by blending chakka, a semi-solid

mass obtained after draining whey from dahi with sugar, cream and other ingredients like fruit pulp, nuts, flavour and colour. Traditional shrikhand is high in fat and sugar content. Demand for functional dairy products such as low calorie and free fat dairy products are consistently increasing due to the growing awareness among the consumers. Fat replacers have facilitated the development of reduced fat and fat free food that have the taste and texture of high fat food with less fat and fewer calories. The commonly used fat replacers are of either carbohydrate or protein based. The use of whey protein concentrate (WPC) in low fat dairy products helps to maintain the sensory

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properties and make the product more nutritive. WPC has been considered as an interesting fat replacer due to its functional and technological properties. Increasing demand for low calorie food products has urged the food industry to find out natural low-calorie sweeteners. An ideal sweetener should be colorless, odorless, stable and easily soluble in food system. Stevia is such a natural low calorie sweetener extracted from the leaves of the plant *Stevia rebaudiana*. It is a functional sweetener and widely used as a nutraceutical. It prevents diabetes, tooth decay, decreases weight and improves digestion.

MATERIALS AND METHODS

Preparation of shrikhand

Shrikhand was prepared as per the method suggested by Aneja *et. al.*(2002). Fresh whole milk required for the study was collected from the University Dairy Plant, College of Veterinary and Animal Sciences, Mannuthy. Freeze dried mixed dahi culture (NCDC-352) was procured from National Collection of Dairy Cultures, National Dairy Research Institute, Karnal. Whey protein concentrate (80 per cent) was procured from OMG LABS, Chennai-34, Tamil Nadu. Stevia was obtained from One cure herbs (India) Pvt. Ltd, Thiruvananthapuram.

The whole milk was preheated to 35°C and skim milk was obtained by cream separation. The control skim milk shrikhand was prepared from skim milk (0.4% fat). Skim milk was heated to 71°C for 10 min and then cooled to 30°C. It was

then inoculated with curd culture (NCDC 352) at 1 per cent level and incubated at 30°C for 8 hours. It is then stirred and hung in a muslin cloth for six hours, to drain off whey to obtain chakka. Chakka was mixed with food grade cane sugar (20%) to get shrikhand. Treatment groups of skim milk shrikhand were prepared with the incorporation of WPC (80 per cent) at 1, 1.5 and 2 per cent level and 6 per cent sugar.

Treatment group of low calorie shrikhand samples were prepared from cow milk by using stevia at three different levels 0.025 (T₁), 0.05 (T₂) and 0.1 (T₃) per cent along with 2 per cent sugar.

Analysis of shrikhand

Chemical analysis

Control and treatment groups of shrikhand were analyzed for titratable acidity, fat, total solids, ash and protein contents according to the procedure described by the FSSAI (2016).

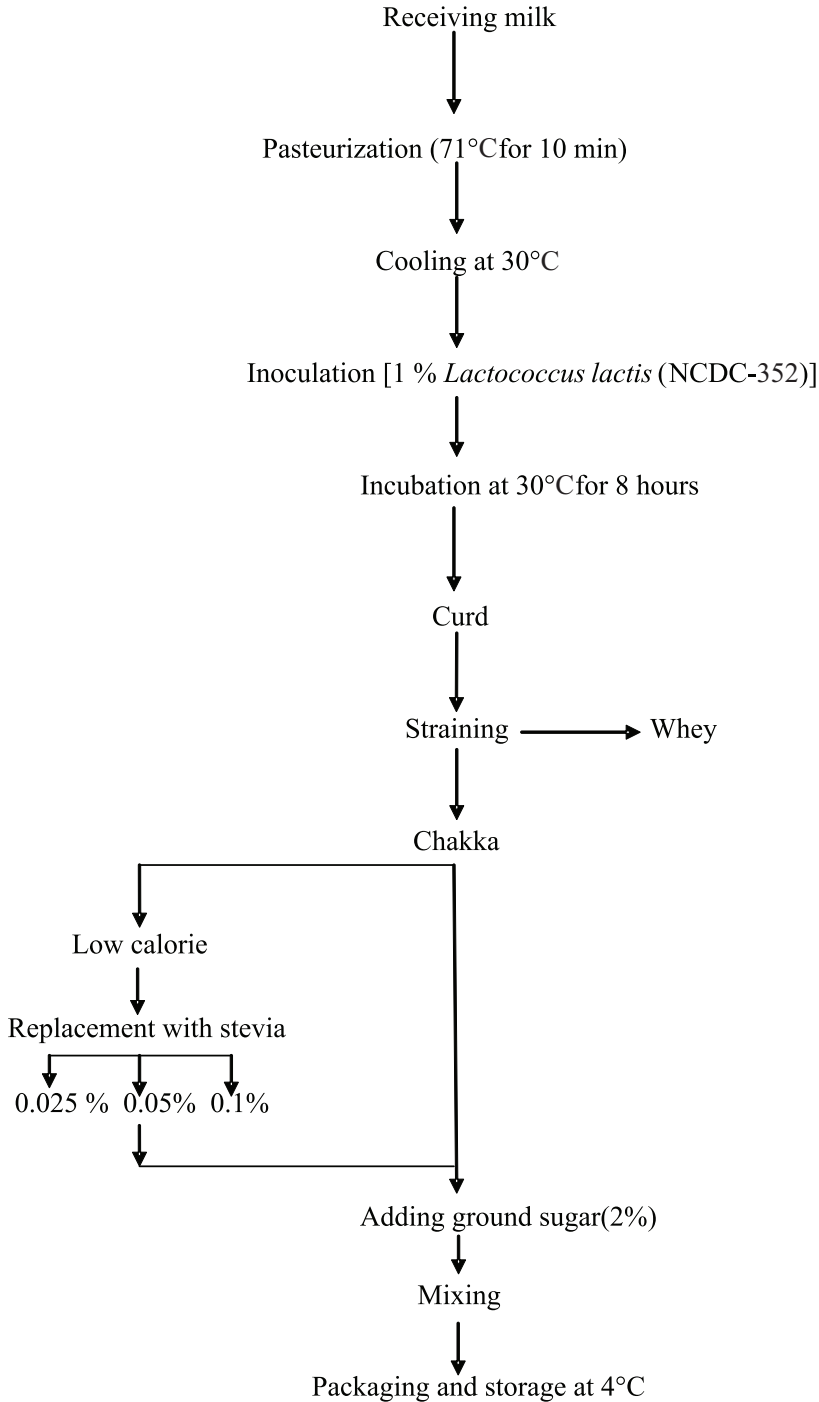
Microbiological quality

The coliform count and yeast and mould count of shrikhand samples were determined according to the procedure described by BIS (1981).

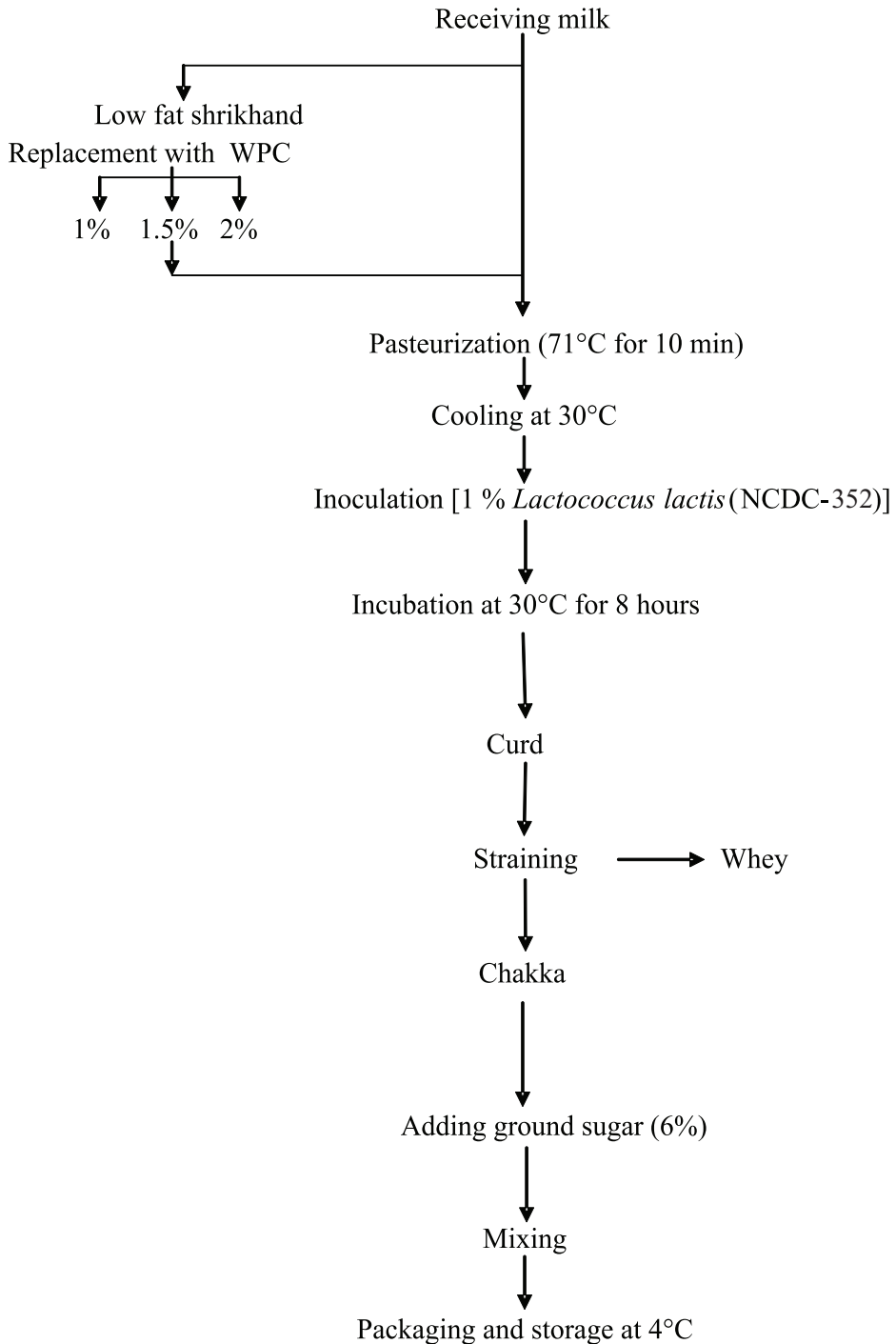
Sensory evaluation

The fresh shrikhand samples were evaluated for their sensory characteristics such as color and appearance, flavor, body texture and overall acceptability as per the method recommended by BIS (2003).

FLOW CHART FOR PREPARING LOW CALORIE SHRIKHAND



FLOW CHART FOR PREPARING LOW FAT SHRIKHAND



RESULTS AND DISCUSSION

Low calorie shrikhanda

Physico-chemical qualities of low calorie shrikhanda are presented in Table 1.

Titratable acidity

The mean titratable acidity of control shrikhanda (C) was 1.38 ± 0.06 per cent lactic acid. The mean titratable acidity of shrikhanda samples incorporated with 0.025 per cent (T_1), 0.05 per cent (T_2) and 0.1 per cent (T_3) stevia were 1.41 ± 0.04 , 1.41 ± 0.04 and 1.43 ± 0.05 per cent lactic acid respectively. There was no significant difference in titratable acidity between control and stevia added shrikhanda samples. Ozdemir *et al.* (2015) had prepared low calorie ice cream with sucrose and stevia. They have also reported no significant difference in acidity between control and stevia incorporated samples.

Fat

The mean fat per cent of control shrikhanda (C) and shrikhanda added with stevia at 0.025 (T_1), 0.05 (T_2) and 0.1 per cent (T_3) were 9.03 ± 0.03 , 9.24 ± 0.09 , 9.26 ± 0.07 and 9.41 ± 0.07 respectively. Fat per cent of shrikhanda showed a highly significant ($p \leq 0.01$) difference between control and stevia added shrikhanda samples. There was no significant difference in fat per cent within treatment groups. Addition of stevia had increased the fat content of shrikhanda. Singh *et al.* (2017) have also reported similar findings in stevia added kulfi samples.

Total solids

The mean total solids per cent of control shrikhanda (C) and shrikhanda incorporated with stevia at 0.025 (T_1), 0.05 (T_2) and 0.1 per cent (T_3) were 42.69 ± 2.31 , 26.49 ± 1.83 , 26.49 ± 1.83 and 27.81 ± 2.42 respectively. The total solids content was significantly lower in shrikhanda samples incorporated with stevia. This might be due to the low level of incorporation of sugar. There was no significant difference in total solids percentage of between the treatment groups. Similar observations were made by Singh (2000).

Ash

The mean ash per cent of control (C) and shrikhanda added with stevia at 0.025 per cent (T_1), 0.05 per cent (T_2) and 0.1 per cent (T_3) were 0.92 ± 0.02 , 0.91 ± 0.02 , 0.89 ± 0.01 and 0.91 ± 0.01 respectively. According to FSSAI (2017), total ash content in shrikhanda should not be more than 0.9 per cent on dry matter basis. The prepared samples met with the legal standards prescribed by FSSAI. Addition of stevia had not significantly altered the ash content.

Protein

The mean protein per cent of control shrikhanda (C) and shrikhanda incorporated with stevia at 0.025 per cent (T_1), 0.05 per cent (T_2) and 0.1 per cent (T_3) were 9.07 ± 0.02 , 8.69 ± 0.08 , 7.63 ± 0.09 and 7.42 ± 0.02 respectively. Protein per cent of shrikhanda showed a highly significant ($p \leq 0.01$) difference between control and stevia added samples. There was also a significant difference in protein content

within the treatment groups. However, Deshmukhan *et al.* (2014) had found that there was no marked effect of stevia on protein content of ice cream.

Microbiological quality

Table 2 represents the microbiological quality of low calorie shrikhand.

Coliform count

Coliforms were present on the 1st and 5th day of storage. The mean coliform count of control shrikhand (C) were 1.05 ± 0.05 , 0.33 ± 0.21 log cfu/g on 1st and 5th day of storage respectively. The corresponding values for T₁, T₂ and T₃ groups shrikhand were 0.98 ± 0.21 , 0.50 ± 0.22 , 1.18 ± 0.08 , 0.33 ± 0.21 and 1.10 ± 0.06 , 0.33 ± 0.21 log cfu/g respectively for the same period. Coliforms were absent on 10th and 15th day of storage in all shrikhand samples. There was a significant difference in coliform count between control and T₁ but there was no significant difference between control, T₂ and T₃.

According to FSSAI (2015), coliform count of shrikhand should not be more than 10 cfu/g. All shrikhand samples met with the legal standards prescribed by FSSAI. Coliform count decreased during storage in all groups of shrikhand samples. This could be attributed to the development of acidity due to the production of lactic acid by starter cultures.

Nimashaji *et al.* (2018) also reported a progressive decrease in coliform count of shrikhand during storage.

Yeast and mould count

The mean yeast and mould count of control shrikhand (C) were 1.05 ± 0.05 , 1.36 ± 0.04 , 1.52 ± 0.04 and 1.58 ± 0.04 log cfu/g for 1st, 5th, 10th and 15th days of storage respectively. The corresponding values for 0.025 per cent stevia added shrikhand (T₁) were 1.25 ± 0.05 , 1.39 ± 0.04 , 1.47 ± 0.04 and 1.68 ± 0.03 log cfu/g. The yeast and mould count of 0.05 per cent stevia added shrikhand (T₂) were 1.06 ± 0.17 , 1.42 ± 0.04 , 1.47 ± 0.04 and 1.65 ± 0.02 log cfu/g for the same storage intervals. The values for 0.1 per cent stevia added shrikhand (T₃) were 1.15 ± 0.07 , 1.42 ± 0.04 , 1.56 ± 0.03 and 1.65 ± 0.02 log cfu/g respectively during 1, 5, 10 and 15 days of storage. There was a progressive increase in yeast and mould counts in both control and treatment shrikhand samples during storage. However, the counts were within the legally permitted limit.

Sensory evaluation

Sensory scores of low calorie shrikhand are represented in Table 3. The mean flavour, colour and appearance, body and texture, container and overall scores of control shrikhand were 47.17 ± 0.87 , 27.83 ± 1.25 , 14.00 ± 0.52 , 4.33 ± 0.21 and 93.33 ± 2.50 respectively. The corresponding scores for shrikhand added with 0.025 per cent stevia (T₁) were 40.75 ± 1.65 , 26.00 ± 1.63 , 13.17 ± 0.60 , 4.17 ± 0.31 and 84.08 ± 3.68 respectively. The scores of 0.05 per cent stevia added shrikhand (T₂) were 43.33 ± 1.41 , 26.83 ± 1.56 , 13.33 ± 0.80 , 4.17 ± 0.31 and 87.67 ± 3.74 respectively. The scores for 0.1 per cent stevia added sample (T₃) were 45.17 ± 1.49 , 24.33 ± 1.36 , 13.00 ± 0.73 , 4.17 ± 0.31 and 86.67 ± 3.45

respectively. The sensory scores for colour and appearance, body and texture and container had shown no significant difference between the control and stevia added shrikhand samples. However, sensory scores for flavour were significantly lower in stevia added shrikhand samples than control. Shrikhand prepared with 0.05 per cent stevia and 2 per cent sugar had obtained maximum over all acceptability scores among the treatment groups. Giri *et al.* (2014) had reported that kulfi prepared by replacing half the sugar content with stevia was similar to control in sensory characteristics.

Low Fat shrikhand

The results of physico-chemical analysis of low fat shrikhand are represented in Table 4

Titrateable acidity

The mean titrateable acidity of skim milk control shrikhand (C) was 0.94 ± 0.003 per cent lactic acid. The titrateable acidity of skim milk shrikhand incorporated with 1 (T_1), 1.5 (T_2) and 2 per cent (T_3) WPC were 0.95 ± 0.004 , 0.97 ± 0.002 and 0.97 ± 0.002 per cent lactic acid respectively. Titrateable acidity of shrikhand showed a highly significant difference ($p \leq 0.01$) between control and WPC added skim milk shrikhand samples. There was no significant difference in titrateable acidity between T_1 and T_2 but there was a significant difference between T_1 and other two treatment groups. The incorporation of WPC into shrikhand resulted in an increase in acidity. Even though, there was an increase in titrateable acidity due to the incorporation of WPC, the acidity has not exceeded the legal limit

of 1.4 per cent lactic acid. The results are in agreement with the results reported by Venkatesh (2014).

Fat

The mean fat per cent of skim milk control shrikhand (C) was 2.91 ± 0.024 . The fat per cent of shrikhand incorporated with WPC at 1 (T_1), 1.5 (T_2) and 2 (T_3) per cent were 0.96 ± 0.010 , 0.86 ± 0.011 and 0.56 ± 0.020 respectively. Fat per cent of shrikhand showed a highly significant ($p \leq 0.01$) difference between control skim milk shrikhand and WPC added skim milk shrikhand. Incorporation of WPC has resulted in reduction of fat content. The reduction was proportional to the level of incorporation.

According to FSSAI (2017), milk fat content in shrikhand should be minimum 8.5 per cent on dry matter basis. However, no specification was prescribed for fat content in low fat shrikhand.

Total solids

The mean total solids per cent of skim milk control shrikhand (C) was 41.30 ± 0.257 . The total solids per cent of skim milk shrikhand incorporated with WPC at 1 (T_1), 1.5 (T_2) and 2 (T_3) per cent were 26.45 ± 0.388 , 25.60 ± 0.235 and 26.25 ± 0.203 respectively. Total solids per cent of shrikhand showed a highly significant ($P \leq 0.01$) difference between control and WPC added skim milk shrikhand but there was no significant difference between the treatment groups. Reduction of sugar content in WPC added shrikhand might have resulted in low total solids content.

Ash

The mean ash per cent of skim milk control shrikhand (C) was 0.94 ± 0.015 . The ash per cent of skim milk shrikhand incorporated with WPC at 1 (T_1), 1.5 (T_2) and 2 (T_3) per cent were 0.95 ± 0.012 , 0.93 ± 0.014 and 0.92 ± 0.013 respectively. There was no significant difference in ash content between control and WPC added skim milk shrikhand samples. Nimashaji *et al.*, (2018) have also reported similar findings in low fat shrikhand incorporated with whey protein concentrate at 2 per cent level.

Protein

The mean protein per cent of skim milk control shrikhand (C) was 8.99 ± 0.026 . Protein content of skim milk shrikhand samples incorporated with WPC at 1 (T_1), 1.5 (T_2) and 2 (T_3) per cent were 10.37 ± 0.094 , 11.57 ± 0.058 and 12.76 ± 0.125 respectively. Protein per cent of shrikhand showed a highly significant difference between control and WPC added skim milk shrikhand samples. The addition of WPC had significantly increased the protein content of shrikhand samples. Similar findings were reported by Nimashaji *et al.*, (2018).

Microbiological quality

Table 5 represents the microbiological quality of low fat shrikhand.

Coliform count

The mean coliform count of skim milk control shrikhand (C) were 1.05 ± 0.05 and 0.50 ± 0.22 log cfu/g respectively on 1st and 5th day of storage. In T_1 , the mean coliform counts were 1.10 ± 0.06 and

0.33 ± 0.21 log cfu/g respectively. The corresponding values for T_2 were 1.18 ± 0.08 and 0.38 ± 0.25 log cfu/g respectively. In T_3 the coliform count were 1.20 ± 0.06 and 0.50 ± 0.22 log cfu/g respectively on 1st and 5th day of storage. Coliforms were absent on 10th and 15th day of storage. There was no significant difference in coliform count between control and treatment groups of shrikhand. According to FSSAI (2015), coliform count of shrikhand should not be more than 10 cfu/g. The prepared products met with the legal standards. The decrease in coliform count might be attributed to the development of acidity during storage.

Yeast and mould count

The mean yeast and mould counts of skim milk control shrikhand (C) were 1.10 ± 0.06 , 1.41 ± 0.05 , 1.52 ± 0.03 and 1.60 ± 0.03 log cfu/g for the 1st, 5th, 10th and 15th days of storage respectively. The values for 1 per cent WPC added skim milk shrikhand (T_1) were 1.25 ± 0.05 , 1.39 ± 0.04 , 1.47 ± 0.04 and 1.63 ± 0.04 log cfu/g respectively for the same period. The yeast and mould count of 1.5 per cent WPC added skim milk shrikhand (T_2) were 1.20 ± 0.06 , 1.42 ± 0.04 , 1.49 ± 0.04 and 1.61 ± 0.03 log cfu/g respectively. The values for 2 per cent WPC added skim milk shrikhand (T_3) were 1.28 ± 0.06 , 1.42 ± 0.04 , 1.56 ± 0.03 and 1.65 ± 0.02 log cfu/g respectively for the same storage intervals. There was a progressive increase in yeast and mould count in both control and treatment shrikhand samples during storage.

According to FSSAI (2015), yeast and mould count of shrikhand should not be more than 50 cfu/g. The prepared samples

met with the legal limit until 15 days of refrigerated storage. The findings were in close resemblance with the findings of Shridharrao (2012).

Sensory evaluation

The sensory scores of low fat shrikhand are presented in table 6. The mean flavour, colour and appearance, body and texture, container and overall scores of control skim milk shrikhand (C₁) were 48.00±0.26, 29.00±0.26, 13.83±0.31, 4.67±0.21 and 92.50±0.62 respectively. The scores for 1 per cent WPC added skim milk shrikhand (T₁) were 45.83±0.87, 28.67±0.33, 13.83±0.31, 4.50±0.22 and 92.83±1.54 respectively. The sensory scores for 1.5 per cent WPC added skim milk shrikhand (T₂) were 46.00±1.09, 28.83±0.31, 13.33±0.42, 4.50±0.22 and 92.67±1.80 respectively. The scores for 2 per cent WPC added skim milk shrikhand sample (T₃) were 45.00±1.29, 28.67±0.33, 13.67±0.33, 4.50±0.22 and 91.83±1.78 respectively. The sensory scores showed no significant difference between control and WPC added skim milk shrikhand samples.

Skim milk shrikhand incorporated with one per cent WPC had obtained better overall acceptability scores among the treatment groups. Berber (2011) had also reported better flavor in WPC incorporated yogurt.

Conclusion

From the above results, it could be concluded that, low calorie shrikhand could be prepared by partly replacing sugar with stevia. There was a significant reduction in total solids content due to the reduction of sugar content in stevia added shrikhand.

A decrease in protein content and increase in fat content was observed in shrikhand samples incorporated with stevia. The sensory quality of low calorie shrikhand prepared by using 0.05 per cent stevia was comparable to control shrikhand. Low fat shrikhand could be prepared by using WPC as fat replacer. A significant increase in protein content and decrease in fat content was observed in WPC added skim milk shrikhand samples. A significant increase in titratable acidity was also noticed in WPC added skim milk shrikhand. The sensory quality of low fat shrikhand incorporated with 1 per cent WPC was comparable to control. Hence WPC can be effectively used as fat replacer for the preparation of low fat shrikhand.

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Table 1 Physico-Chemical qualities(Mean ± S.E) of low calorie shrikhand

Parameters	Control	Low calorie shrikhand		
		T ₁ (0.025 per cent stevia)	T ₂ (0.05 per cent stevia)	T ₃ (0.1 per cent stevia)
Acidity (% LA)	1.38±0.06 ^a	1.41±0.04 ^a	1.41±0.04 ^a	1.43±0.05 ^a
Fat (%)	9.03±0.02 ^a	9.24±0.09 ^b	9.26±0.07 ^b	9.41±0.07 ^b
Total solids (%)	42.69±2.13 ^a	26.49±1.83 ^b	26.49±1.83 ^b	27.81±2.42 ^b
Ash (%)	0.92±0.01 ^a	0.91±0.02 ^a	0.89±0.01 ^a	0.91±0.01 ^a
Protein (%)	9.07±0.02 ^a	8.69±0.08 ^b	7.63±0.09 ^c	7.42±0.02 ^d

Mean within a row bearing different superscripts differ significantly (P≤ 0.01)

Mean within a row bearing same superscripts are homogenous

Table 2 Microbiological quality of (Mean ± S.E) low calorie shrikhand

Parameter	Samples	1 st day	5 th day	10 th day	15 th day
Coliform count log cfu/g	C (Control)	1.05±0.05 ^b	0.33±0.21 ^a	0	0
	T ₁ (0.025 % stevia)	0.98±0.21 ^c	0.50±0.22 ^b	0	0
	T ₂ (0.05 % stevia)	1.18±0.08 ^b	0.33±0.21 ^a	0	0
	T ₃ (0.1 % stevia)	1.10±0.06 ^b	0.33±0.21 ^a	0	0
Yeast and Mold count log cfu/g	C(Control)	1.05±0.05 ^a	1.36±0.04 ^b	1.52±0.04 ^b	1.58±0.04 ^c
	T ₁ (0.025 % stevia)	1.25±0.05 ^a	1.39±0.04 ^b	1.47±0.04 ^b	1.68±0.03 ^c
	T ₂ (0.05 % stevia)	1.06±0.17 ^a	1.42±0.04 ^b	1.47±0.04 ^b	1.65±0.02 ^c
	T ₃ (0.1 % stevia)	1.15±0.07 ^a	1.42±0.04 ^b	1.56±0.03 ^b	1.65±0.02 ^c

Mean within a column bearing different superscripts differ significantly (P≤ 0.01)

Mean within a column bearing same superscripts are homogenous

Table 3 Sensory scores of (Mean ± S.E) low calorie shrikhand

Sample	Flavour	Colour and appearance	Body and texture	Container	Overall score
C	47.17±0.87 ^a	27.83±1.25 ^a	14.00±0.52 ^a	4.33±0.21 ^a	93.33±2.50 ^a
T ₁	40.75±1.65 ^b	26.00±1.63 ^a	13.17±0.60 ^a	4.17±0.31 ^a	84.08±3.68 ^b
T ₂	43.33±1.41 ^b	26.83±1.56 ^a	13.33±0.80 ^a	4.17±0.31 ^a	87.67±3.74 ^b
T ₃	45.17±1.49 ^b	24.33±1.36 ^a	13.00±0.73 ^a	4.17±0.31 ^a	86.67±3.45 ^b

Mean within a column bearing different superscripts differ significantly (P≤ 0.01)

Mean within a column bearing same superscripts are homogenous

Table 4 Physico-Chemical qualities(Mean \pm S.E) of low fat shrikhand

Parameters	Skim milk Control (C)	Low fat shrikhand incorporated with WPC at different levels		
		T ₁ (1 per cent WPC)	T ₂ (1.5 per cent WPC)	T ₃ (2 per cent WPC)
Acidity (% LA)	0.94 \pm .003 ^a	0.95 \pm .004 ^b	0.97 \pm .002 ^c	0.97 \pm .002 ^c
Fat(%)	2.91 \pm .024 ^a	0.96 \pm .010 ^b	0.86 \pm .011 ^c	0.56 \pm .020 ^d
Total solids(%)	41.30 \pm 0.25 ^a	26.45 \pm 0.38 ^b	25.60 \pm 0.23 ^b	26.25 \pm 0.203 ^b
Ash(%)	0.94 \pm 0.015 ^a	0.95 \pm 0.012 ^a	0.93 \pm 0.014 ^a	0.92 \pm 0.013 ^a
Protein(%)	8.99 \pm 0.026 ^a	10.37 \pm 0.094 ^b	11.57 \pm 0.058 ^c	12.76 \pm 0.125 ^d

Mean within a row bearing different superscripts differ significantly ($P \leq 0.01$)

Mean within a row bearing same superscripts are homogenous

Table 5 Microbiological quality (Mean \pm S.E) of low fat shrikhand

Parameter	samples	1 st day	5 th day	10 th day	15 th day
	C	1.05 \pm 0.05 ^a	0.50 \pm 0.22 ^a	0	0
	T ₁	1.10 \pm 0.06 ^a	0.33 \pm 0.21 ^a	0	0
	T ₂	1.18 \pm 0.08 ^a	0.38 \pm 0.25 ^a	0	0
	T ₃	1.20 \pm 0.06 ^a	0.50 \pm 0.22 ^a	0	0
	C	1.10 \pm 0.06 ^a	1.41 \pm 0.05 ^b	1.52 \pm 0.03 ^b	1.60 \pm 0.03 ^c
	T ₁	1.25 \pm 0.05 ^a	1.39 \pm 0.04 ^b	1.47 \pm 0.04 ^b	1.63 \pm 0.04 ^c
	T ₂	1.20 \pm 0.06 ^a	1.42 \pm 0.04 ^b	1.49 \pm 0.04 ^b	1.61 \pm 0.03 ^c
	T ₃	1.28 \pm 0.06 ^a	1.42 \pm 0.04 ^b	1.56 \pm 0.03 ^b	1.65 \pm 0.02 ^c

Mean within a column bearing different superscripts differ significantly ($P \leq 0.01$)

Mean within a column bearing same superscripts are homogenous

Table 6 Sensory scores (Mean \pm S.E) of low fat shrikhand

Sample	Flavour	Colour and appearance	Body and texture	Container	Overall score
C	48.00 \pm 0.26 ^a	29.00 \pm 0.26 ^a	13.83 \pm 0.31 ^a	4.67 \pm 0.21 ^a	92.50 \pm 0.62 ^a
T ₁	45.83 \pm 0.87 ^a	28.67 \pm 0.33 ^a	13.83 \pm 0.31 ^a	4.50 \pm 0.22 ^a	92.83 \pm 1.54 ^a
T ₂	46.00 \pm 1.09 ^a	28.83 \pm 0.31 ^a	13.33 \pm 0.42 ^a	4.50 \pm 0.22 ^a	92.67 \pm 1.80 ^a
T ₃	45.00 \pm 1.29 ^a	28.67 \pm 0.33 ^a	13.67 \pm 0.33 ^a	4.50 \pm 0.22 ^a	91.83 \pm 1.78 ^a

Mean within a column bearing same superscripts are homogenous