

Appendix A

Physical, Chemical and Microbiological Analysis

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Appendix A-1: Physical analysis

1. Syneresis (a modified method from Wu *et al.*, 2001)

Weight 20 g of soymilk yogurt sample and a dried erlenmeyer flask. Put a filter paper of Whatman no. 1 on the top of a buchner funnel and spread on the top of the filter paper the yogurt sample. Filter the yogurt sample for 10 min using a vacuum suction and record the weight of the liquid that passed the filter paper. Calculate the syneresis of the yogurt sample by following a formula below;

$$\text{Syneresis (\%)} = \frac{\text{Weight of liquid from filtration} \times 100}{\text{weight of sample (g)}}$$

2. Consistency (a modified method from Gonzalez-Martinez *et al.*, 2002)

Prepare a Bostwick consistometer by holding a screener that will keep the sample until the consistency measurement starts. Place the soymilk yogurt sample in the empty space of the Boswick consistometer, behind the screener. Begin the consistency measurement by releasing the screener to let the yogurt sample flows on the Bostwick consistometer. Measure the distance that is reached by the sample within 30 s at $4 \pm 2.0^{\circ}\text{C}$.

Appendix A-2: Chemical analysis

1. Total titratable acidity by a titrimetric method (a modified method from an AOAC Official method (AOAC, 1998))

Weight 10 g of soymilk yogurt sample into a 250 ml volumetric flask and adjust with distilled water to 100 ml. After that, drop 1-3 phenolphthalein indicators and titrate the sample with 0.1 N NaOH until the sample colour is pink. Calculate the total acidity by following an equation below;

$$\text{Lactic acid (\%)} = \frac{(\text{ml of NaOH} \times 100) \times 0.009}{\text{weight of sample (g)}}$$

2. Moisture content (a modified method from an AOAC Official method (AOAC, 2000))

Dry a moisture can with a tight-fit cover in a hot air oven at 100°C for 3 h and weight it. Weight 2 g of soymilk yogurt sample into the dried moisture can and put the can with the sample in a hot air oven at 100°C. Dry the sample for about 5 h. Press the cover can tightly into the moisture can and remove them from the oven. Cool the moisture can and its cover in an active desiccator. Weight the moisture can and the dried sample. Calculate the moisture content of the sample by following an equation below;

$$\text{Moisture content (\%)} = \frac{(W_1 - W_2) \times 100}{\text{weight of sample (g)}}$$

Note: W_1 is weight of the moisture can and sample before put into a hot air oven (g)

W_2 is weight of the moisture can and sample after taken out from a hot air oven (g)

3. Total Solid content (a modified method from an AOAC Official method
(AOAC, 2002))

$$\text{Total solid content (\%)} = 100 - \text{Moisture content (\%)}$$

Appendix A-3: Microbiological analysis

Media

1. Homofermentative Heterofermentative Differential Agar: HHD

Typical composition (g/l) was prepared as described by
McDonald *et al.* (1987):

D (-) Fructose	2.5
Potassium dihydrogen phosphate	2.5
Peptone from casein	10.0
Soytone	1.5
Casamino acids	3.0
Yeast extract	1.0
Tween 80	1.0
Agar	20.0

Dye solution:

Add 0.1 g of bromocresol green to 30 ml of 0.01 N NaOH. Sterilize by autoclaving at 121°C for 15 min.

Preparation:

Add all composition in 1 l of distilled water by heating in a boiling water bath and adjust pH to 7.0 ± 0.2 at 25°C by 1 N NaOH. Sterilize by autoclaving at 121°C for 15 min. Cool to 50°C and aseptically add 2% of dye solution. Mix well and distribute into final containers. The final pH was 7.0 ± 0.2 at 25°C .

2. M17 Agar**Typical composition (g/litre) :**

Tryptone	5.0
Soya peptone	5.0
Meat digest	5.0
Yeast extract	2.5
Ascorbic acid	0.5
Magnesium sulphate	0.25
Di-sodium-glycerophosphate	19.0

Lactose solution 10% (w/v):

Add 10 g of lactose (L70) to 100 ml of distilled water. Sterilize by autoclaving at 121°C for 15 min.

Preparation :

Add 37.25 g of M17 broth and 15 g agar in 950 ml of distilled water by heating in a boiling water bath and sterilize by autoclaving at 121°C for 15 min. Cool to 50°C and aseptically add 50 ml of sterile lactose solution (10% w/v) and add 1% of sterile 1 N HCl. Mix well and distribute into final containers. The final pH was 6.9 ± 0.2 at 25°C .

3. de Man Rogosa Sharpe (MRS) agar

Typical composition (g/litre) :

Peptone	10.0
Meat Extract	8.0
Yeast Extract	4.0
Lactose	10.0
Sucrose	10.0
Sodium acetate	5.0
Diammonium citrate	2.0
K ₂ HPO ₄	2.0
MgSO ₄	0.2
MnSO ₂	0.05
Tween 80 (Polysorbate)	1.0
Bromocresol purple (2%)	2.0
Agar	15.0

Preparation :

Add 52 g of MRS agar in 1 l of distilled water by heating in a boiling water bath and sterilize by autoclaving at 121⁰C for 15 min. Cool to 45⁰C. Before used, the final pH of the MRS agar was 5.4 ± 0.2 at 25⁰C by adjusting the media with 1.32 ml of glacial acetic acid/l of MRS agar.

Appendix A-4: Prebiotic compounds

Fibersol-2

Physical Characteristics

1. Color: Off-white powder; clear, transparent in 10% solution; resists both enzymatic and non-enzymatic browning.

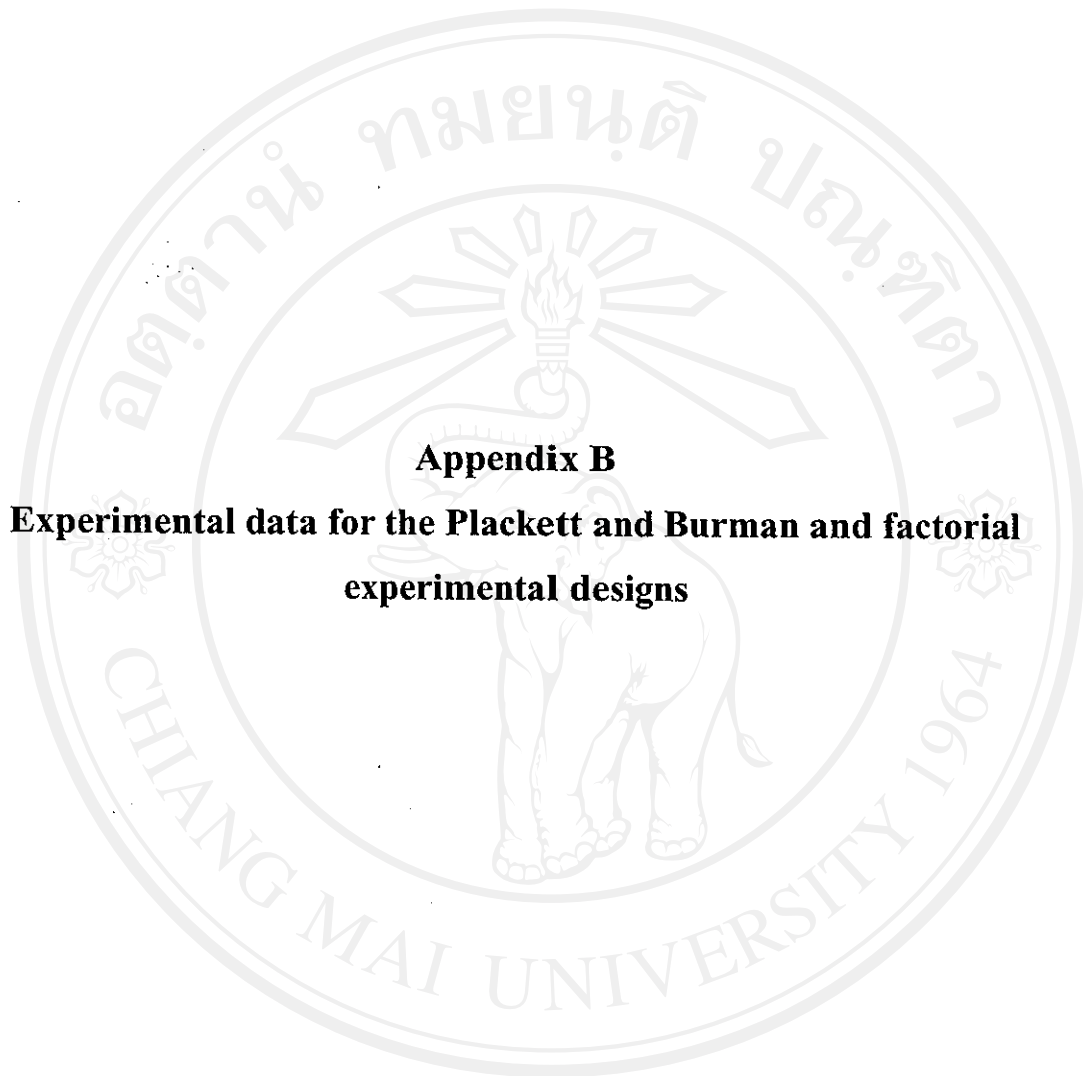
2. Flavor: No flavor, clean
3. Solubility: Water soluble up to 70% (w/w) at 20⁰C
4. Dispersibility: Excellent
5. Hygroscopicity: Very low
6. Stability: Acid, heat/retort processing, and freeze/ thaw stable
7. Viscosity: Very low; 15 cps, 30% solution at 30⁰C
8. Sweetness: Low, no sweetness (10% of sucrose at 30%T.S)
9. Bulk density: Approximately 0.48g per ml (30 lbs per cubic foot)

Typical Chemical Properties

1. Water-soluble dietary fiber: More than 85% via an AOAC Official Method 2001.03
2. Moisture: 5% Maximum
3. Carbohydrate profile (% of total carbohydrate)
By DP₁: 1.5%, DP₂: 2.5%, DP₃: 4.0%, DP₄₋₆: 12.0% and DP₇₊: 80.0%
4. Protein and Fat: None
5. Ash: 0.2% maximum
6. Dextrose Equivalent: 8.0-12.0 via the WS method
7. pH: 4-6 in 10% Solution
8. Calories: 4.0 calories per g (U.S CFR)
9. Extraneous Matter: Free from foreign material

Microbiological Properties

1. Standard Plate Count: 300/g maximum
2. Yeast and Mold: 100/g maximum
3. *Salmonella*: Negative/25g
4. Coliform and *E. coli*: Negative/g



Appendix B

**Experimental data for the Plackett and Burman and factorial
experimental designs**

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Appendix B-1: Physical, chemical and microbiological results of soymilk yogurt during storage at 4⁰C for 21 days based on a Plackett and Burman design

1. Soymilk yogurt with an addition of *B. bifidum*

Microbiological properties

Table 1 The number of *Bifidobacterium bifidum* (log CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	8.61 ± 0.01	7.66 ± 0.02	7.30 ± 0.04	6.31 ± 0.00
2	7.72 ± 0.05	6.96 ± 0.03	6.59 ± 0.01	6.41 ± 0.03
3	7.98 ± 0.02	7.13 ± 0.02	6.73 ± 0.00	6.50 ± 0.04
4	7.85 ± 0.05	7.16 ± 0.01	6.64 ± 0.03	6.41 ± 0.04
5	7.25 ± 0.01	6.91 ± 0.01	6.58 ± 0.02	6.41 ± 0.06
6	7.43 ± 0.01	7.12 ± 0.06	6.68 ± 0.03	6.65 ± 0.02
7	8.81 ± 0.01	8.45 ± 0.05	7.25 ± 0.03	6.81 ± 0.04
8	9.04 ± 0.02	8.68 ± 0.01	7.82 ± 0.01	6.74 ± 0.01
9	7.71 ± 0.02	7.26 ± 0.03	6.42 ± 0.00	6.36 ± 0.03
10	9.41 ± 0.04	8.69 ± 0.04	7.49 ± 0.03	6.74 ± 0.02
11	8.39 ± 0.03	7.52 ± 0.04	6.82 ± 0.02	6.67 ± 0.00
12	7.87 ± 0.03	7.51 ± 0.01	7.00 ± 0.02	6.64 ± 0.00

Note: values were mean from 2 replications

Table 2 The number of *Streptococcus thermophilus* (log CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	15.62 ± 0.05	13.75 ± 0.04	13.22 ± 0.00	12.46 ± 0.02
2	13.65 ± 0.05	11.13 ± 0.05	11.95 ± 0.01	11.71 ± 0.01
3	13.73 ± 0.03	11.19 ± 0.03	10.43 ± 0.04	10.08 ± 0.04
4	14.31 ± 0.04	11.60 ± 0.03	11.16 ± 0.00	9.87 ± 0.01
5	10.21 ± 0.04	9.87 ± 0.00	9.40 ± 0.03	9.09 ± 0.00
6	12.65 ± 0.04	11.25 ± 0.04	9.75 ± 0.06	9.36 ± 0.00
7	16.67 ± 0.01	15.88 ± 0.02	13.52 ± 0.04	12.56 ± 0.02
8	11.04 ± 0.01	10.74 ± 0.00	9.79 ± 0.03	9.18 ± 0.02
9	14.68 ± 0.00	14.37 ± 0.00	13.55 ± 0.04	12.62 ± 0.03
10	14.46 ± 0.04	12.55 ± 0.04	11.66 ± 0.04	11.72 ± 0.01
11	14.54 ± 0.04	12.03 ± 0.01	11.53 ± 0.04	11.39 ± 0.01
12	13.46 ± 0.02	10.00 ± 0.00	9.25 ± 0.03	9.17 ± 0.01

Note: values were mean from 2 replications

Table 3 The number of *Lactobacillus bulgaricus* (log CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	14.63 ± 0.00	12.69 ± 0.04	11.75 ± 0.03	10.67 ± 0.03
2	11.01 ± 0.03	10.48 ± 0.04	9.835 ± 0.04	8.96 ± 0.06
3	12.95 ± 0.03	9.69 ± 0.03	8.29 ± 0.00	7.89 ± 0.06
4	10.63 ± 0.00	8.34 ± 0.01	8.06 ± 0.01	7.46 ± 0.05
5	9.56 ± 0.06	8.29 ± 0.01	7.59 ± 0.05	6.73 ± 0.06
6	10.65 ± 0.07	9.80 ± 0.03	8.58 ± 0.03	8.06 ± 0.04
7	13.93 ± 0.04	12.80 ± 0.05	10.95 ± 0.04	9.65 ± 0.03
8	11.072 ± 0.00	8.57 ± 0.04	7.89 ± 0.06	7.13 ± 0.02
9	11.56 ± 0.00	11.06 ± 0.02	10.46 ± 0.01	8.70 ± 0.03
10	11.60 ± 0.04	10.49 ± 0.00	8.59 ± 0.00	7.82 ± 0.03
11	11.53 ± 0.04	10.12 ± 0.03	8.92 ± 0.00	7.90 ± 0.02
12	11.17 ± 0.03	9.78 ± 0.01	8.45 ± 0.01	7.84 ± 0.00

Note: values were mean from 2 replications

Chemical properties**Table 4 Total titratable acidity (% lactic acid) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days**

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	0.07 ± 0.005	0.08 ± 0.002	0.08 ± 0.01	0.10 ± 0.02
2	0.10 ± 0.006	0.12 ± 0.004	0.12 ± 0.01	0.13 ± 0.02
3	0.10 ± 0.006	0.10 ± 0.02	0.10 ± 0.007	0.11 ± 0.01
4	0.10 ± 0.006	0.12 ± 0.004	0.13 ± 0.01	0.13 ± 0.003
5	0.07 ± 0.01	0.08 ± 0.004	0.09 ± 0.01	0.09 ± 0.004
6	0.06 ± 0.002	0.08 ± 0.00	0.08 ± 0.006	0.08 ± 0.006
7	0.05 ± 0.001	0.06 ± 0.004	0.08 ± 0.01	0.09 ± 0.02
8	0.09 ± 0.001	0.10 ± 0.004	0.12 ± 0.01	0.13 ± 0.001
9	0.04 ± 0.005	0.06 ± 0.006	0.07 ± 0.001	0.07 ± 0.004
10	0.09 ± 0.002	0.10 ± 0.02	0.13 ± 0.01	0.13 ± 0.002
11	0.08 ± 0.01	0.09 ± 0.005	0.10 ± 0.004	0.10 ± 0.005
12	0.08 ± 0.002	0.08 ± 0.002	0.10 ± 0.10	0.10 ± 0.006

Note: values were mean from 2 replications

Table 5 pH values of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	4.30 ± 0.00	4.16 ± 0.01	4.13 ± 0.01	4.18 ± 0.00
2	4.30 ± 0.00	4.23 ± 0.04	4.20 ± 0.03	4.29 ± 0.17
3	4.30 ± 0.00	4.13 ± 0.01	4.12 ± 0.06	4.16 ± 0.16
4	4.90 ± 0.00	4.47 ± 0.04	4.44 ± 0.05	4.45 ± 0.02
5	4.30 ± 0.00	4.05 ± 0.04	4.02 ± 0.00	4.07 ± 0.08
6	4.90 ± 0.00	4.36 ± 0.01	4.35 ± 0.01	4.44 ± 0.12
7	4.90 ± 0.00	4.48 ± 0.15	4.46 ± 0.08	4.51 ± 0.07
8	4.30 ± 0.00	4.12 ± 0.04	4.13 ± 0.12	4.21 ± 0.13
9	4.90 ± 0.00	4.43 ± 0.04	4.36 ± 0.09	4.32 ± 0.03
10	4.90 ± 0.00	4.37 ± 0.01	4.37 ± 0.09	4.39 ± 0.21
11	4.9 ± 0.00	4.60 ± 0.14	4.50 ± 0.01	4.43 ± 0.19
12	4.3 ± 0.00	4.08 ± 0.00	4.12 ± 0.04	4.12 ± 0.19

Note: values were mean from 2 replications

Table 6 Moisture content (%) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	79.00 ± 2.18	78.83 ± 1.61
2	80.33 ± 1.26	79.83 ± 0.76
3	70.00 ± 0.50	69.33 ± 0.76
4	70.83 ± 1.53	69.33 ± 1.61
5	80.17 ± 2.02	79.67 ± 0.58
6	86.17 ± 2.02	88.17 ± 1.15
7	87.50 ± 0.87	86.00 ± 0.50
8	77.17 ± 0.76	76.83 ± 1.76
9	75.33 ± 0.29	73.83 ± 0.29
10	80.00 ± 1.32	79.33 ± 0.76
11	71.00 ± 0.50	70.50 ± 1.80
12	89.67 ± 2.08	91.17 ± 1.15

Note: values were mean from 3 replications

Table 7 Total solid content (%) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	21.00 ± 2.18	21.17 ± 1.61
2	19.67 ± 1.26	20.17 ± 0.76
3	30.00 ± 0.50	30.67 ± 0.76
4	29.17 ± 1.53	30.67 ± 0.76
5	19.83 ± 2.02	20.33 ± 1.61
6	13.83 ± 2.02	11.83 ± 1.15
7	12.50 ± 0.87	14.00 ± 0.50
8	22.83 ± 0.76	23.17 ± 1.76
9	24.67 ± 0.29	26.17 ± 0.29
10	20.00 ± 1.32	20.67 ± 0.76
11	29.00 ± 0.50	29.50 ± 1.80
12	10.33 ± 2.08	8.83 ± 1.15

Note: values were mean from 3 replications

Table 8 Total Soluble Solid (⁰Brix) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	16.20 ± 0.76	19.60 ± 0.40
2	13.70 ± 1.15	15.07 ± 0.90
3	17.00 ± 0.00	24.33 ± 0.58
4	24.60 ± 0.53	28.80 ± 1.06
5	17.67 ± 0.58	19.00 ± 1.25
6	7.33 ± 0.58	10.93 ± 0.90
7	11.73 ± 0.64	12.00 ± 0.00
8	13.47 ± 1.36	15.00 ± 0.92
9	17.80 ± 1.20	21.13 ± 1.17
10	13.93 ± 1.01	15.73 ± 0.58
11	20.93 ± 1.01	26.33 ± 0.31
12	8.00 ± 0.00	9.13 ± 0.81

Note: values were mean from 3 replications

Physical properties

Table 9 Consistency (cm) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	7.80 ± 0.29	6.33 ± 0.29
2	5.00 ± 0.00	4.67 ± 0.29
3	13.67 ± 0.58	12.50 ± 0.50
4	24.00 ± 0.00	24.00 ± 0.00
5	24.00 ± 0.00	24.00 ± 0.00
6	24.00 ± 0.00	24.00 ± 0.00
7	6.80 ± 0.29	4.50 ± 0.50
8	22.07 ± 0.12	24.00 ± 0.00
9	7.67 ± 0.58	6.67 ± 0.29
10	3.00 ± 0.00	2.33 ± 0.58
11	13.67 ± 0.58	23.33 ± 0.30
12	24.00 ± 0.00	24.00 ± 0.00

Note: values were mean from 3 replications

Table 10 Syneresis (%) of soymilk yogurt with an addition of *B. bifidum* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	3.00 ± 0.85	14.00 ± 1.90
2	14.27 ± 1.56	34.75 ± 5.23
3	4.82 ± 0.78	40.18 ± 6.20
4	51.63 ± 5.99	54.08 ± 4.76
5	33.92 ± 8.51	40.28 ± 2.02
6	66.50 ± 10.90	77.12 ± 8.16
7	14.57 ± 5.90	21.95 ± 5.38
8	14.78 ± 4.44	19.47 ± 3.65
9	18.05 ± 5.78	38.62 ± 7.78
10	9.87 ± 1.88	22.15 ± 5.69
11	3.08 ± 0.25	6.77 ± 2.98
12	71.87 ± 2.75	77.85 ± 4.40

Note: values were mean from 3 replications

Table 11 Viscosity (cp) at 0.5 rpm of soymilk yogurt with an addition of *B. bifidum* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	9281.00 ± 878.60	8663.00 ± 890.70
2	21361.00 ± 3595.70	19379.00 ± 2684.00
3	4761.00 ± 495.10	4370.00 ± 254.50
4	23633.00 ± 2555.10	21843.00 ± 1778.00
5	2662.00 ± 813.70	2274.00 ± 538.80
6	566.80 ± 71.20	537.50 ± 73.00
7	4509.00 ± 246.20	4180.00 ± 140.90
8	7156.00 ± 771.90	6926.00 ± 808.40
9	15572.00 ± 2217.40	13689.00 ± 2965.00
10	6174.00 ± 288.60	5990.00 ± 197.60
11	4190.00 ± 193.50	4010.00 ± 206.80
12	2139.00 ± 94.30	2046.00 ± 152.00

Note: values were mean from 3 replications

2. Soymilk yogurt with an addition of *L. acidophilus*Table 12 The number of *L. acidophilus* (log CFU/g) in soymilk yogurt during storage at 4°C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	7.22 ± 0.03	7.03 ± 0.04	6.92 ± 0.04	6.31 ± 0.05
2	7.83 ± 0.01	6.98 ± 0.06	6.92 ± 0.04	6.26 ± 0.00
3	7.65 ± 0.05	6.72 ± 0.05	6.97 ± 0.06	6.36 ± 0.03
4	7.64 ± 0.01	6.62 ± 0.02	6.62 ± 0.06	6.36 ± 0.01
5	6.96 ± 0.02	6.87 ± 0.04	6.78 ± 0.03	6.25 ± 0.03
6	7.55 ± 0.02	6.77 ± 0.04	6.46 ± 0.04	6.27 ± 0.04
7	8.74 ± 0.03	7.67 ± 0.06	6.96 ± 0.04	6.47 ± 0.01
8	7.63 ± 0.03	7.00 ± 0.03	6.88 ± 0.05	6.40 ± 0.06
9	7.64 ± 0.05	7.11 ± 0.01	6.87 ± 0.01	6.37 ± 0.01
10	8.88 ± 0.02	7.34 ± 0.07	7.03 ± 0.02	6.62 ± 0.02
11	9.15 ± 0.03	7.39 ± 0.03	7.32 ± 0.00	6.87 ± 0.01
12	7.58 ± 0.04	6.89 ± 0.01	6.78 ± 0.04	6.02 ± 0.01

Note: values were mean from 2 replications

Table 13 The number of *Streptococcus thermophilus* (log CFU/g) in soymilk yogurt during storage at 4°C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	15.45 ± 0.05	14.079 ± 0.03	14.03 ± 0.05	13.43 ± 0.01
2	13.86 ± 0.03	12.13 ± 0.06	12.07 ± 0.05	11.64 ± 0.03
3	13.42 ± 0.01	11.33 ± 0.03	10.58 ± 0.03	10.10 ± 0.02
4	14.35 ± 0.02	11.63 ± 0.01	11.54 ± 0.04	10.91 ± 0.03
5	10.16 ± 0.03	10.68 ± 0.00	10.68 ± 0.06	10.31 ± 0.01
6	12.63 ± 0.06	10.55 ± 0.03	9.25 ± 0.06	9.03 ± 0.03
7	16.36 ± 0.02	15.51 ± 0.04	12.68 ± 0.01	11.96 ± 0.01
8	10.88 ± 0.03	10.21 ± 0.01	10.02 ± 0.03	9.89 ± 0.03
9	14.34 ± 0.01	13.94 ± 0.01	13.41 ± 0.02	13.08 ± 0.06
10	14.29 ± 0.00	11.59 ± 0.01	11.36 ± 0.02	11.02 ± 0.00
11	14.56 ± 0.00	11.67 ± 0.01	11.61 ± 0.04	11.20 ± 0.01
12	12.99 ± 0.06	11.12 ± 0.07	11.07 ± 0.01	10.87 ± 0.01

Note: values were mean from 2 replications

Table 14 The number of *Lactobacillus bulgaricus* (log CFU/g) in soymilk yogurt during storage at 4°C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	14.48 ± 0.02	12.55 ± 0.02	11.76 ± 0.01	10.83 ± 0.04
2	11.02 ± 0.02	10.06 ± 0.06	9.89 ± 0.03	7.81 ± 0.01
3	12.15 ± 0.03	8.40 ± 0.01	8.35 ± 0.01	8.08 ± 0.03
4	10.93 ± 0.04	8.85 ± 0.04	8.56 ± 0.01	7.82 ± 0.00
5	9.17 ± 0.05	8.43 ± 0.06	7.98 ± 0.00	7.77 ± 0.01
6	10.77 ± 0.01	8.85 ± 0.01	8.58 ± 0.01	8.19 ± 0.01
7	13.66 ± 0.06	12.53 ± 0.02	10.61 ± 0.01	8.92 ± 0.02
8	10.88 ± 0.00	8.10 ± 0.01	8.05 ± 0.02	7.87 ± 0.03
9	11.59 ± 0.01	11.09 ± 0.02	9.97 ± 0.01	9.02 ± 0.01
10	11.35 ± 0.01	9.35 ± 0.01	8.91 ± 0.03	8.43 ± 0.02
11	11.69 ± 0.05	9.59 ± 0.03	9.16 ± 0.01	9.01 ± 0.03
12	11.18 ± 0.02	9.26 ± 0.01	8.78 ± 0.03	8.28 ± 0.01

Note: values were mean from 2 replications

Chemical properties

Table 15 Total titratable acidity (% lactic acid) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	0.07 ± 0.01	0.08 ± 0.006	0.08 ± 0.03	0.09 ± 0.02
2	0.11 ± 0.003	0.12 ± 0.001	0.12 ± 0.03	0.13 ± 0.01
3	0.10 ± 0.01	0.10 ± 0.01	0.10 ± 0.02	0.11 ± 0.01
4	0.11 ± 0.01	0.12 ± 0.02	0.13 ± 0.03	0.14 ± 0.02
5	0.07 ± 0.007	0.08 ± 0.009	0.09 ± 0.01	0.09 ± 0.001
6	0.05 ± 0.009	0.07 ± 0.02	0.07 ± 0.02	0.08 ± 0.02
7	0.05 ± 0.00	0.06 ± 0.01	0.07 ± 0.02	0.07 ± 0.01
8	0.09 ± 0.009	0.11 ± 0.003	0.10 ± 0.01	0.12 ± 0.01
9	0.04 ± 0.004	0.05 ± 0.01	0.06 ± 0.02	0.07 ± 0.01
10	0.10 ± 0.003	0.12 ± 0.01	0.15 ± 0.002	0.12 ± 0.03
11	0.08 ± 0.003	0.10 ± 0.02	0.11 ± 0.02	0.10 ± 0.01
12	0.07 ± 0.005	0.08 ± 0.004	0.08 ± 0.01	0.07 ± 0.001

Note: values were mean from 2 replications

Table 16 pH values of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	4.30 ± 0.00	4.17 ± 0.02	4.12 ± 0.00	4.13 ± 0.13
2	4.30 ± 0.00	4.19 ± 0.04	4.19 ± 0.02	4.23 ± 0.16
3	4.30 ± 0.00	4.11 ± 0.007	4.16 ± 0.06	4.17 ± 0.22
4	4.90 ± 0.00	4.46 ± 0.12	4.43 ± 0.10	4.42 ± 0.21
5	4.30 ± 0.00	4.02 ± 0.04	4.01 ± 0.01	4.07 ± 0.19
6	4.90 ± 0.00	4.28 ± 0.04	4.28 ± 0.07	4.30 ± 0.21
7	4.90 ± 0.00	4.29 ± 0.17	4.31 ± 0.24	4.25 ± 0.45
8	4.30 ± 0.00	4.10 ± 0.06	4.09 ± 0.04	4.13 ± 0.21
9	4.90 ± 0.00	4.37 ± 0.23	4.29 ± 0.19	4.29 ± 0.31
10	4.90 ± 0.00	4.30 ± 0.007	4.26 ± 0.02	4.29 ± 0.16
11	4.90 ± 0.00	4.57 ± 0.26	4.54 ± 0.28	4.50 ± 0.39
12	4.30 ± 0.00	4.04 ± 0.06	4.07 ± 0.09	4.11 ± 0.24

Note: values were mean from 2 replications

Table 17 Total Soluble Solid (^oBrix) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	18.70 ± 2.21	21.67 ± 1.56
2	14.70 ± 1.41	15.33 ± 0.58
3	22.70 ± 5.69	28.17 ± 0.76
4	23.20 ± 2.71	29.67 ± 1.16
5	18.70 ± 1.30	17.67 ± 1.16
6	8.90 ± 1.80	10.00 ± 1.00
7	9.70 ± 1.53	10.00 ± 1.00
8	14.40 ± 1.51	15.00 ± 1.00
9	19.20 ± 1.71	23.00 ± 0.00
10	14.30 ± 0.58	15.00 ± 1.00
11	25.20 ± 3.37	25.67 ± 0.58
12	8.70 ± 0.95	10.00 ± 0.00

Note: values were mean from 3 replications

Table 18 Total solid content (%) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	20.83 ± 2.36	22.00 ± 3.12
2	18.00 ± 1.80	17.83 ± 1.44
3	24.33 ± 5.13	26.50 ± 2.78
4	27.17 ± 2.93	25.00 ± 4.27
5	21.33 ± 0.29	20.50 ± 0.87
6	11.50 ± 0.50	10.83 ± 2.02
7	11.50 ± 1.32	11.50 ± 1.32
8	18.00 ± 3.91	15.67 ± 1.61
9	21.83 ± 2.26	21.00 ± 2.60
10	17.33 ± 1.04	18.00 ± 3.04
11	26.83 ± 1.89	26.17 ± 2.57
12	10.83 ± 0.29	11.33 ± 0.29

Note: values were mean from 3 replications

Table 19 Moistures content (%) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	79.17 ± 2.36	78.00 ± 3.12
2	82.00 ± 1.80	82.17 ± 1.44
3	75.67 ± 5.13	73.5 ± 2.78
4	72.83 ± 2.93	75.00 ± 4.27
5	78.67 ± 0.29	79.50 ± 0.87
6	88.50 ± 0.50	89.17 ± 2.02
7	88.50 ± 1.32	88.50 ± 1.32
8	82.00 ± 3.91	84.43 ± 1.61
9	78.17 ± 2.26	79.00 ± 2.60
10	82.67 ± 1.04	82.00 ± 3.04
11	73.17 ± 1.89	73.83 ± 2.57
12	89.17 ± 0.29	88.67 ± 0.29

Note: values were mean from 3 replications

Physical properties**Table 20 Consistency (cm) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days**

Treatments	Storage time	
	0 day	21 days
1	7.80 ± 1.37	6.67 ± 0.60
2	5.20 ± 0.25	5.67 ± 1.20
3	14.00 ± 1.00	11.50 ± 0.50
4	24.00 ± 0.00	24.00 ± 0.00
5	24.00 ± 0.00	24.00 ± 0.00
6	24.00 ± 0.00	24.00 ± 0.00
7	7.20 ± 1.76	3.00 ± 0.50
8	22.20 ± 0.29	24.00 ± .00
9	6.70 ± 2.08	8.17 ± 0.80
10	4.00 ± 1.73	1.83 ± 0.60
11	13.30 ± 1.53	24.00 ± 0.00
12	24.00 ± 0.00	24.00 ± 0.00

Note: values were mean from 3 replications

Table 21 Syneresis (%) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	6.43 ± 3.90	12.32 ± 3.65
2	13.27 ± 2.49	32.55 ± 1.74
3	5.97 ± 1.36	67.55 ± 1.53
4	49.97 ± 7.20	44.45 ± 6.71
5	38.82 ± 10.43	12.78 ± 4.30
6	60.33 ± 8.58	47.83 ± 10.24
7	19.82 ± 17.93	30.42 ± 4.63
8	10.38 ± 6.96	6.17 ± 3.52
9	19.58 ± 9.78	56.28 ± 1.16
10	11.03 ± 1.03	27.43 ± 2.71
11	3.23 ± 2.05	9.47 ± 1.66
12	75.38 ± 6.90	71.55 ± 1.36

Note: values were mean from 3 replications

Table 22 Viscosity (cp) at 0.5 rpm of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	9741.70 ± 4665.70	9742.00 ± 2846.00
2	19995.70 ± 7766.00	18741.00 ± 3562.00
3	4453.70 ± 832.90	4250.00 ± 457.00
4	25366.00 ± 5471.50	22470.00 ± 2121.00
5	2224.30 ± 1846.10	1804.00 ± 469.00
6	566.10 ± 62.00	569.50 ± 120.90
7	4766.70 ± 128.00	4754.00 ± 236.00
8	7879.70 ± 883.40	7502.00 ± 288.00
9	17422.30 ± 4827.90	14889.00 ± 2475.00
10	6585.30 ± 151.00	6086.00 ± 302.20
11	4197.30 ± 134.40	3943.00 ± 257.00
12	1729.70 ± 427.50	1495.00 ± 233.00

Note: values were mean from 3 replications

Appendix B-2: Physical, chemical and microbiological results of soymilk yogurt during storage at 4⁰C for 21 days based on a factorial experiment in center point

1. Soymilk yogurt with an addition of *B. bifidum*

Microbiological properties

Table 23 The number of *Bifidobacterium bifidum* (log CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	7.50 ± 0.00	7.13 ± 0.02	6.96 ± 0.07	6.22 ± 0.03
2	7.40 ± 0.01	6.79 ± 0.04	6.40 ± 0.06	6.18 ± 0.01
3	8.10 ± 0.01	7.64 ± 0.04	7.33 ± 0.01	6.67 ± 0.02
4	7.76 ± 0.05	7.29 ± 0.05	7.14 ± 0.02	6.74 ± 0.03
5	7.71 ± 0.04	7.10 ± 0.06	7.11 ± 0.01	6.6 ± 0.05
6	7.46 ± 0.01	7.16 ± 0.07	6.74 ± 0.01	6.10 ± 0.06
7	8.17 ± 0.03	7.17 ± 0.03	7.71 ± 0.03	6.5 ± 0.00
8	8.32 ± 0.03	7.71 ± 0.03	7.33 ± 0.03	6.71 ± 0.00
9	7.98 ± 0.01	7.52 ± 0.03	6.68 ± 0.02	6.30 ± 0.03
10	7.82 ± 0.05	7.23 ± 0.01	6.75 ± 0.01	6.16 ± 0.03
11	8.49 ± 0.04	7.83 ± 0.03	7.35 ± 0.04	6.89 ± 0.06

Note: values were mean from 2 replications

Table 24 The number of *Streptococcus thermophilus* (log CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	14.73 ± 0.02	13.73 ± 0.01	11.60 ± 0.04	10.63 ± 0.01
2	14.42 ± 0.03	14.17 ± 0.07	13.35 ± 0.01	12.55 ± 0.02
3	14.32 ± 0.04	15.06 ± 0.01	14.10 ± 0.00	12.81 ± 0.01
4	14.06 ± 0.00	13.43 ± 0.01	12.34 ± 0.04	11.94 ± 0.02
5	14.96 ± 0.04	14.60 ± 0.05	13.11 ± 0.02	12.18 ± 0.01
6	13.35 ± 0.04	13.08 ± 0.03	11.93 ± 0.03	11.07 ± 0.03
7	14.56 ± 0.06	13.92 ± 0.02	12.52 ± 0.01	11.68 ± 0.03
8	13.93 ± 0.02	12.95 ± 0.01	11.28 ± 0.03	10.79 ± 0.04
9	14.13 ± 0.03	13.41 ± 0.03	12.57 ± 0.01	11.85 ± 0.02
10	14.29 ± 0.03	13.63 ± 0.01	12.50 ± 0.05	11.37 ± 0.01
11	14.19 ± 0.01	13.13 ± 0.01	12.11 ± 0.04	11.56 ± 0.02

Note: values were mean from 2 replications

Table 25 The number of *Lactobacillus bulgaricus* (log CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	11.54 ± 0.06	10.69 ± 0.04	9.74 ± 0.01	8.51 ± 0.02
2	12.54 ± 0.05	11.46 ± 0.05	10.09 ± 0.03	8.76 ± 0.02
3	13.46 ± 0.06	12.65 ± 0.00	10.63 ± 0.00	6.73 ± 0.04
4	12.72 ± 0.04	11.67 ± 0.07	10.14 ± 0.05	10.06 ± 0.04
5	11.57 ± 0.01	11.40 ± 0.04	9.65 ± 0.01	8.58 ± 0.03
6	10.38 ± 0.00	10.03 ± 0.05	8.98 ± 0.01	7.73 ± 0.01
7	11.66 ± 0.02	10.98 ± 0.04	10.06 ± 0.05	8.44 ± 0.02
8	11.90 ± 0.04	11.15 ± 0.01	10.26 ± 0.03	9.68 ± 0.05
9	11.50 ± 0.04	10.48 ± 0.01	9.94 ± 0.01	8.00 ± 0.07
10	10.71 ± 0.04	10.28 ± 0.04	9.93 ± 0.01	7.91 ± 0.05
11	11.52 ± 0.05	10.50 ± 0.04	9.93 ± 0.01	7.88 ± 0.01

Note: values were mean from 2 replications

Chemical properties**Table 26 Total titratable acidity (% lactic acid) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days**

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	0.05 ± 0.002	0.06 ± 0.01	0.06 ± 0.002	0.07 ± 0.004
2	0.06 ± 0.02	0.07 ± 0.002	0.08 ± 0.01	0.10 ± 0.003
3	0.06 ± 0.003	0.06 ± 0.06	0.07 ± 0.005	0.08 ± 0.006
4	0.03 ± 0.007	0.04 ± 0.00	0.04 ± 0.003	0.05 ± 0.003
5	0.05 ± 0.003	0.07 ± 0.008	0.09 ± 0.001	0.10 ± 0.01
6	0.03 ± 0.001	0.04 ± 0.008	0.05 ± 0.001	0.05 ± 0.001
7	0.03 ± 0.001	0.05 ± 0.004	0.05 ± 0.05	0.05 ± 0.007
8	0.03 ± 0.004	0.05 ± 0.00	0.06 ± 0.00	0.06 ± 0.004
9	0.04 ± 0.002	0.06 ± 0.003	0.06 ± 0.004	0.07 ± 0.002
10	0.04 ± 0.002	0.06 ± 0.002	0.07 ± 0.002	0.07 ± 0.003
11	0.04 ± 0.001	0.05 ± 0.002	0.07 ± 0.002	0.07 ± 0.001

Note: values were mean from 2 replications

Table 27 pH values of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	4.60 ± 0.00	4.25 ± 0.01	4.21 ± 0.01	4.22 ± 0.007
2	4.60 ± 0.00	4.24 ± 0.01	4.22 ± 0.02	4.22 ± 0.007
3	4.60 ± 0.00	4.26 ± 0.01	4.21 ± 0.06	4.19 ± 0.01
4	5.20 ± 0.00	4.42 ± 0.007	4.40 ± 0.007	4.39 ± 0.007
5	4.60 ± 0.00	4.28 ± 0.04	4.18 ± 0.00	4.18 ± 0.04
6	5.20 ± 0.00	4.50 ± 0.06	4.40 ± 0.06	4.39 ± 0.06
7	5.20 ± 0.00	4.48 ± 0.10	4.39 ± 0.02	4.37 ± 0.04
8	5.20 ± 0.00	4.63 ± 0.04	4.54 ± 0.08	4.48 ± 0.007
9	4.90 ± 0.00	4.34 ± 0.01	4.31 ± 0.03	4.32 ± 0.02
10	4.90 ± 0.00	4.38 ± 0.00	4.33 ± 0.01	4.28 ± 0.03
11	4.90 ± 0.00	4.35 ± 0.00	4.32 ± 0.02	4.33 ± 0.014

Note: values were mean from 2 replications

Table 28 Total Soluble Solid (⁰Brix) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	15.90 ± 1.20	19.10 ± 0.40
2	16.20 ± 0.50	20.00 ± 0.60
3	27.60 ± 1.40	31.80 ± 1.10
4	16.80 ± 0.20	21.30 ± 0.50
5	27.00 ± 0.00	29.70 ± 1.50
6	16.10 ± 0.20	18.40 ± 2.00
7	27.60 ± 1.00	31.40 ± 1.70
8	27.10 ± 0.60	31.80 ± 0.80
9	20.20 ± 0.40	25.20 ± 1.20
10	19.90 ± 1.50	24.90 ± 1.90
11	20.60 ± 0.90	26.30 ± 0.60

Note: values were mean from 3 replications

Table 29 Moisture content (%) of soymilk yogurt with an addition of *B. bifidum* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	88.20 ± 0.80	88.80 ± 0.30
2	82.70 ± 0.60	80.80 ± 0.30
3	80.20 ± 0.30	80.30 ± 0.60
4	88.80 ± 1.60	88.50 ± 0.50
5	71.50 ± 0.90	72.20 ± 0.80
6	82.30 ± 0.30	82.20 ± 2.00
7	81.30 ± 1.50	82.00 ± 1.00
8	73.20 ± 0.30	72.80 ± 0.30
9	78.50 ± 0.50	77.80 ± 0.30
10	79.80 ± 1.00	79.50 ± 0.90
11	79.20 ± 0.30	77.30 ± 0.60

Note: values were mean from 3 replications

Table 30 Total solid content (%) of soymilk yogurt with an addition of *B. bifidum* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	11.80 ± 0.80	11.20 ± 0.30
2	17.30 ± 0.60	19.20 ± 0.30
3	19.80 ± 0.30	19.70 ± 0.60
4	11.20 ± 1.60	11.50 ± 0.50
5	28.50 ± 0.90	27.80 ± 0.80
6	17.70 ± 0.30	17.80 ± 2.00
7	18.70 ± 1.50	18.00 ± 1.00
8	26.80 ± 0.30	27.20 ± 0.30
9	21.50 ± 0.50	22.20 ± 0.30
10	20.20 ± 1.00	20.50 ± 0.90
11	20.80 ± 0.30	22.70 ± 0.60

Note: values were mean from 3 replications

Physical properties

Table 31 Consistency (cm) of soymilk yogurt with an addition of *B. bifidum* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	20.30 ± 0.40	16.90 ± 0.50
2	16.50 ± 0.50	15.60 ± 1.00
3	20.00 ± 1.70	23.60 ± 0.40
4	18.80 ± 0.80	18.40 ± 0.40
5	15.00 ± 0.00	17.20 ± 2.60
6	21.80 ± 0.70	22.40 ± 1.30
7	18.30 ± 1.30	18.20 ± 1.10
8	16.70 ± 1.20	19.20 ± 0.30
9	20.9 ± 0.10	23.1 ± 0.10
10	21.7 ± 0.60	22.8 ± 0.80
11	21.8 ± 1.10	23.8 ± 0.30

Note: values were mean from 3 replications

Table 32 Syneresis (%) of soymilk yogurt with an addition of *B. bifidum* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	13.45 ± 0.78	25.48 ± 2.27
2	9.08 ± 1.32	11.52 ± 0.35
3	10.73 ± 0.56	15.38 ± 1.76
4	9.65 ± 1.26	13.13 ± 0.97
5	5.75 ± 2.80	10.97 ± 2.88
6	14.17 ± 4.30	29.20 ± 4.95
7	9.43 ± 4.80	14.50 ± 3.83
8	9.98 ± 1.84	16.48 ± 2.80
9	15.05 ± 4.50	33.73 ± 1.78
10	18.60 ± 6.92	32.52 ± 4.85
11	14.45 ± 3.36	31.60 ± 2.60

Note: values were mean from 3 replications

Table 33 Viscosity (cp) 0.5 rpm of soymilk yogurt with an addition of *B. bifidum* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	7948.00 ± 333.00	7215.00 ± 735.00
2	8919.00 ± 965.00	8793.00 ± 520.00
3	7641.00 ± 614.00	7140.00 ± 813.00
4	10005.00 ± 1155.00	10033.00 ± 1380.00
5	12171.00 ± 2611.00	10516.00 ± 1871.00
6	7396.00 ± 922.00	7074.00 ± 223.00
7	9165.00 ± 295.00	8378.00 ± 634.00
8	10605.00 ± 2386.00	11915.00 ± 2104.00
9	8087.00 ± 724.00	7693.00 ± 148.00
10	7658.00 ± 485.00	7464.00 ± 113.00
11	7868.00 ± 981.00	7719.00 ± 259.00

Note: values were mean from 3 replications

2. Soymilk yogurt with an addition of *L. acidophilus*

Microbiological properties

Factorial of *Lactobacillus acidophilus*

Table 34 The number of *L. acidophilus* (log CFU/g) in soymilk yogurt during storage at 4°C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	8.23 ± 0.05	7.79 ± 0.03	7.57 ± 0.03	6.59 ± 0.01
2	7.84 ± 0.06	7.26 ± 0.01	6.74 ± 0.01	6.09 ± 0.02
3	8.54 ± 0.01	7.72 ± 0.02	7.05 ± 0.02	6.26 ± 0.02
4	8.36 ± 0.02	7.61 ± 0.02	7.31 ± 0.04	6.17 ± 0.03
5	8.32 ± 0.02	7.46 ± 0.01	6.85 ± 0.06	6.19 ± 0.03
6	8.43 ± 0.06	7.43 ± 0.03	6.75 ± 0.05	6.08 ± 0.03

Note: values were mean from 2 replications

Table 35 The number of *Streptococcus thermophilus* (log CFU/g) in soymilk yogurt during storage at 4°C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	13.63 ± 0.02	12.53 ± 0.01	11.03 ± 0.05	10.92 ± 0.03
2	12.50 ± 0.03	11.68 ± 0.03	10.80 ± 0.06	10.31 ± 0.02
3	14.49 ± 0.03	12.80 ± 0.01	12.21 ± 0.01	11.64 ± 0.01
4	14.78 ± 0.05	14.18 ± 0.04	13.20 ± 0.05	12.56 ± 0.06
5	13.59 ± 0.03	12.24 ± 0.05	11.71 ± 0.04	10.97 ± 0.04
6	13.52 ± 0.00	12.43 ± 0.01	11.18 ± 0.04	11.53 ± 0.06

Note: values were mean from 2 replications

Table 36 The number of *Lactobacillus bulgaricus* (CFU/g) in soymilk yogurt during storage at 4⁰C for 21 days

Treatments	Storage time			
	0 day	7 days	14 days	21 days
1	10.29 ± 0.03	9.18 ± 0.01	8.05 ± 0.04	7.91 ± 0.04
2	10.48 ± 0.06	9.07 ± 0.03	8.74 ± 0.05	8.75 ± 0.00
3	12.69 ± 0.00	11.72 ± 0.04	10.43 ± 0.00	9.55 ± 0.00
4	11.74 ± 0.00	10.75 ± 0.06	9.63 ± 0.04	9.39 ± 0.03
5	10.98 ± 0.06	10.39 ± 0.00	7.98 ± 0.06	8.39 ± 0.04
6	11.32 ± 0.05	10.59 ± 0.05	8.71 ± 0.07	7.94 ± 0.00

Note: values were mean from 2 replications

Chemical properties

Table 37 Total titratable acidity (% lactic acid) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	0.09 ± 0.003	0.10 ± 0.003	0.10 ± 0.003	0.10 ± 0.001
2	0.10 ± 0.002	0.10 ± 0.002	0.10 ± 0.001	0.10 ± 0.002
3	0.09 ± 0.001	0.10 ± 0.001	0.10 ± 0.001	0.10 ± 0.002
4	0.09 ± 0.005	0.10 ± 0.001	0.10 ± 0.001	0.10 ± 0.001
5	0.09 ± 0.007	0.09 ± 0.001	0.10 ± 0.002	0.10 ± 0.001
6	0.10 ± 0.01	0.10 ± 0.002	0.10 ± 0.006	0.10 ± 0.002

Note: values were mean from 2 replications

Table 38 pH values of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time			
	On 0 day	On 7 days	On 14 days	On 21 days
1	4.90 ± 0.00	4.38 ± 0.00	4.29 ± 0.007	4.26 ± 0.01
2	4.90 ± 0.00	4.38 ± 0.00	4.28 ± 0.00	4.27 ± 0.01
3	4.90 ± 0.00	4.39 ± 0.007	4.29 ± 0.00	4.31 ± 0.00
4	4.90 ± 0.00	4.39 ± 0.007	4.29 ± 0.01	4.31 ± 0.007
5	4.90 ± 0.00	4.38 ± 0.007	4.28 ± 0.01	4.29 ± 0.02
6	4.90 ± 0.00	4.38 ± 0.00	4.31 ± 0.007	4.29 ± 0.02

Note: values were mean from 2 replications

Table 39 Total Soluble Solid (^oBrix) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	16.40 ± 0.30	16.00 ± 0.20
2	16.60 ± 0.30	16.30 ± 0.10
3	25.30 ± 1.20	26.10 ± 0.30
4	25.90 ± 1.20	26.00 ± 0.00
5	21.00 ± 1.20	20.30 ± 0.20
6	20.90 ± 0.60	20.00 ± 0.50

Note: values were mean from 3 replications

Table 40 Moisture content (%) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4°C for 21 days

Treatments	Storage time	
	0 day	21 days
1	81.00 ± 0.50	81.50 ± 0.50
2	72.20 ± 0.30	71.50 ± 0.50
3	72.00 ± 0.50	71.80 ± 0.30
4	68.70 ± 0.30	69.20 ± 0.80
5	73.20 ± 0.30	72.20 ± 1.30
6	72.80 ± 0.30	72.80 ± 0.30

Note: values were mean from 3 replications

Table 41 Total solid content (%) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	19.00 ± 0.50	18.50 ± 0.50
2	27.80 ± 0.30	28.50 ± 0.50
3	28.00 ± 0.50	28.20 ± 0.30
4	31.30 ± 0.30	30.80 ± 0.80
5	26.80 ± 0.30	27.80 ± 1.30
6	27.20 ± 0.30	27.20 ± 0.30

Note: values were mean from 3 replications

Physical properties

Table 42 Consistency (cm) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	16.70 ± 0.80	17.30 ± 0.30
2	16.80 ± 0.40	16.80 ± 0.50
3	15.20 ± 0.30	16.50 ± 0.50
4	7.50 ± 0.60	8.50 ± 0.30
5	15.60 ± 0.20	17.30 ± 0.40
6	15.40 ± 0.20	17.40 ± 0.20

Note: values were mean from 3 replications

Table 43 Syneresis (%) of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	21.72 ± 2.18	23.27 ± 1.38
2	16.88 ± 1.96	21.12 ± 1.2
3	14.27 ± 1.53	19.22 ± 2.25
4	5.52 ± 2.60	7.43 ± 0.75
5	13.08 ± 0.95	16.73 ± 1.15
6	11.03 ± 3.86	15.82 ± 2.20

Note: values were mean from 3 replications

Table 44 Viscosity (cp) at 0.5 rpm of soymilk yogurt with an addition of *L. acidophilus* during storage at 4⁰C for 21 days

Treatments	Storage time	
	0 day	21 days
1	8006.80 ± 356.00	7343.00 ± 360.00
2	9009.00 ± 922.00	8633.60 ± 542.00
3	8603.00 ± 856.00	8254.00 ± 389.00
4	20339.40 ± 2826.00	17390.00 ± 2112.00
5	9268.00 ± 3253.00	8619.10 ± 328.00
6	10805.00 ± 2660.00	9725.00 ± 231.00

Note: values were mean from 3 replications

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