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IMPROVING THE PHYSICOCHEMICAL PROPERTIES OF NONFAT YOGHURT

By

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CONTENTS

No.	Contents	Page
1.	INTRODUCTION	1
2.	REVIEW OF LITERATURE	7
2.1.	Impact of using some hydrocolloids on the properties of non-fat yoghurt	7
2.1.1	Impact of using some hydrocolloids on the chemical properties of non-fat yoghurt	7
2.1.2	Impact of using some hydrocolloids on the rheological properties of non-fat yoghurt	10
2.1.3.	Impact of using some hydrocolloids on the sensory properties of non-fat yoghurt	18
2.2.	Impact of using exopolysaccharides-producing cultures (EPS) on the properties of non fat yoghurt	21
2.2.1	Impact of using exopolysaccharides-producing cultures (EPS) on the chemical properties of non-fat the yoghurt	21
2.2.2.	Impact of using exopolysaccharides-producing cultures (EPS) on the rheological properties of non-fat yoghurt	24
2.2.3.	Impact of using exopolysaccharides-producing cultures (EPS) on the sensory properties of non-fat the yoghurt	31
3.	MATERIALS AND METHODS	34
3.1.	MATERIALS	34
3.2.	METHODS	34
3.2.1.	Manufacture of yoghurt treated with different hydrocolloids	34
3.2.2.	Manufacture of yoghurt treated with mixtures of hydrocolloids added by different concentrations	37
3.2.3.	Manufacture of yoghurt treated with exopolysaccharides producing culture (EPS) added at different incubation temperatures	39
3.2.4.	Determination of the activity of yoghurt starter	40
3.2.5.	Chemical analysis	40
3.2.5.1	Determination of titratable Acidity	40
3.2.5.2	Measurement of pH value	40
3.2.5.3	Determination of Acetaldehyde	40
3.2.6.	Physical analysis	41
3.2.6.1	Determination of curd syneresis	41
3.2.6.2	Determination of viscosity	41

3.2.6.3	Determination of water holding capacity	41
3.2.7.	Sensory properties	42
3.2.8.	Statistical analysis	42
4.	RESULTS AND DISCUSSION	43
	PART I	43
	The impact of using some hydrocolloids (guar gum- locust bean gum-xanthan gum -sodium alginate) added by different methods on the chemical, physical and sensory properties of non-fat yoghurt during storage	
4.1.1	Guar gum (GG)	43
4.1.1.1	Sensory properties	43
4.1.1.2	PH development	46
4.1.1.3	Chemical analysis	48
4.1.1.3.1	pH values	48
4.1.1.3.2	Acidity	50
4.1.1.3.3	Acetaldehyde content	51
4.1.1.4.	Some physical properties	54
4.1.1.4.1	Viscosity	54
4.1.1.4.2	Water holding capacity	55
4.1.1.4.3	Curd syneresis	57
4.1.2.	Locust bean gum (LBG)	61
4.1.2.1.	Sensory properties	61
4.1.2.2.	PH development	64
4.1.2.3.	Chemical analysis	66
4.1.2.3.1	pH values	66
4.1.2.3.2	Acidity	68
4.1.2.3.3	Acetaldehyde content	69
4.1.2.4.	Some physical properties	72
4.1.2.4.1	Viscosity	72
4.1.2.4.2	Water holding capacity	74
4.1.2.4.3	Curd syneresis	75
4.1.3.	Xanthan gum (XG)	79
4.1.3.1.	Sensory properties	79
4.1.3.2.	PH development	82
4.1.3.3.	Chemical analysis	84

4.1.3.3.1	pH values	84
4.1.3.3.2	Acidity	86
4.1.3.3.3	Acetaldehyde content	88
4.1.3.4.	Some physical properties	89
4.1.3.4.1	Viscosity	89
4.1.3.4.2	Water holding capacity	91
4.1.3.4.3	Curd syneresis	93
4.1.4.	Sodium alginate (SA)	97
4.1.4.1.	Sensory properties	97
4.1.4.2.	PH development	99
4.1.4.3.	Chemical analysis	101
4.1.4.3.1	pH values	101
4.1.4.3.2	Acidity	103
4.1.4.3.3	Acetaldehyde content	104
4.1.4.4.	Some physical properties	106
4.1.4.4.1	Viscosity	106
4.1.4.4.2	Water holding capacity	108
4.1.4.4.3	Curd syneresis	109
4.2.	PART II The impact of using mixtures of different hydrocolloids (locust bean gum-xanthan gum - guar gum- sodium alginate) with different concentrations on the chemical, physical and sensory properties of non-fat yoghurt during storage	113
4.2.1.	The impact of adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	113
4.2.1.1.	PH development	113
4.2.1.2.	Chemical analysis	114
4.2.1.2.1	pH values	114
4.2.1.2.2	Acidity	116
4.2.1.2.3	Acetaldehyde content	117
4.2.1.3.	Some physical properties	119
4.2.1.3.1	Viscosity	119
4.2.1.3.2	Water holding capacity	120
4.2.1.3.3	Curd syneresis	122

4.2.1.4.	Sensory properties	125
4.2.2.	The impact of adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	129
4.2.2.1.	PH development	129
4.2.2.2.	Chemical analysis	130
4.2.2.2.1	pH values	130
4.2.2.2.2	Acidity	131
4.2.2.2.3	Acetaldehyde content	133
4.2.2.3.	Some physical properties	134
4.2.2.3.1	Viscosity	134
4.2.2.3.2	Water holding capacity	136
4.2.2.3.3	Curd syneresis	137
4.2.2.4.	Sensory properties	140
4.3.	PART III The effect of exopolysaccharides producing culture (EPS) incubated at different temperatures on the chemical, physical and sensory properties of non-fat yoghurt	145
4.3.1.	PH development	145
4.3.2.	Chemical analysis	147
4.3.2.1.	pH values	147
4.3.2.2.	Acidity	148
4.3.2.3.	Acetaldehyde content	149
4.3.3.	Some physical properties	151
4.3.3.1.	Viscosity	151
4.3.3.2.	Water holding capacity	152
4.3.3.3.	Curd syneresis	153
4.3.4.	Sensory properties	156
5.	SUMMARY AND CONCLUSION	160
6.	REFERENCES	173
	Arabic summary	۱

List of Tables

No.	Table	Page
1.	Sensory properties of non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a powder (P) and as a solution before (Sb) or after (Sa) heat treatment	45
2.	Impact of addition methods of guar gum (GG) on the sensory properties of non-fat yoghurt	46
3.	Impact of addition methods of guar gum (GG) on the pH development during fermentation of non-fat yoghurt	48
4.	Impact of addition methods of guar gum (GG) on the pH values of non-fat yoghurt	49
5.	Impact of addition methods of guar gum (GG) on the acidity (%) of non-fat yoghurt	51
6.	Impact of addition methods of guar gum (GG) on the acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt	53
7.	Impact of addition methods of guar gum (GG) on the viscosity (Cp) of non-fat yoghurt	55
8.	Impact of addition methods of guar gum (GG) on the water holding capacity of non-fat yoghurt	57
9.	Impact of addition methods of guar gum (GG) on curd syneresis (%) of non-fat yoghurt	60
10.	Sensory properties of non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as a powder (P) and solution before (Sb) or after (Sa) heat treatment	63
11.	Impact of addition methods of locust bean gum (LBG) on the sensory properties of non-fat yoghurt	64
12.	Impact of addition methods of locust bean gum (LBG) on the pH development during fermentation of non-fat yoghurt	66
13.	Impact of addition methods of locust bean gum (LBG) on the pH values of non-fat yoghurt	67
14.	Impact of addition methods of locust bean gum (LBG) on the acidity (%) of non-fat yoghurt	69
15.	Impact of addition methods of locust bean gum (LBG) on acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt	71
16.	Impact of addition methods of locust bean gum (LBG) on viscosity (Cp) of non-fat yoghurt	73
17.	Impact of addition methods of locust bean gum (LBG) on Water holding capacity (%) of non-fat yoghurt	75
18.	Impact of addition methods of locust bean gum (LBG) on curd syneresis (%) of non-fat yoghurt	78

19.	Sensory properties of non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) or after (Sa) heat treatment	81
20.	Impact of addition methods of Xanthan gum (XG) on the sensory properties of non-fat yoghurt	82
21.	Impact of addition methods of xanthan gum (XG) on the pH development during fermentation of non-fat yoghurt	84
22.	Impact of addition methods of xanthan gum (XG) on the pH of non-fat yoghurt	86
23.	Impact of addition methods of xanthan gum (XG) on the acidity (%) of non-fat yoghurt	87
24.	Impact of addition methods of xanthan gum (XG) on the acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt	89
25.	Impact of addition methods of xanthan gum (XG) on the viscosity (Cp) of non-fat yoghurt	91
26.	Impact of addition methods of xanthan gum (XG) on the water holding capacity (%) of non-fat yoghurt	93
27.	Impact of addition methods of xanthan gum (XG) on curd syneresis (%) of non-fat yoghurt	96
28.	Sensory properties of non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as a powder (P) and as a solution before (Sb) or after (Sa) heat treatment	98
29.	Impact of addition methods of sodium alginate (SA) on the sensory properties of non-fat yoghurt	99
30.	Impact of addition methods of sodium alginate (SA) on the pH development during fermentation of non-fat yoghurt	101
31.	Impact of addition methods of sodium alginate (SA) on the pH of non-fat yoghurt	102
32.	Impact of addition methods of sodium alginate (SA) on the acidity (%) of non-fat yoghurt	104
33.	Impact of addition methods of sodium alginate (SA) on the acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt	106
34.	Impact of addition methods of sodium alginate (SA) on the viscosity (Cp) of non-fat yoghurt	107
35.	Impact of addition methods of sodium alginate (SA) on the water holding capacity (%) of non-fat yoghurt	109
36.	Impact of addition methods of sodium alginate (SA) on curd syneresis (%) of non-fat yoghurt	112
37.	Sensory properties of fresh non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	126

38.	Sensory properties of stored (3 days) non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	127
39.	Sensory properties of stored (7days) non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	128
40.	Sensory properties of fresh non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	141
41.	Sensory properties of stored (3 days) non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	143
42.	Sensory properties of stored (7 days) non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	144
43.	Sensory properties of fresh non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	157
44.	Sensory properties after 3 days of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	158
45.	Sensory properties after 7-days of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	159

List of Figures

No.	Figure	Page
1.	pH development during fermentation of non-fat yoghurt as affected by adding different concentration of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	47
2.	pH of non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as solution before (Sb) or after (Sa) heat treatment	49
3.	Acidity (%) of non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	51
4.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	53
5.	Viscosity (Cp) of non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	55
6.	Water holding capacity (%) of non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	56
7.	Curd syneresis (%) of fresh non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	58
8.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	59
9.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding different concentrations of guar gum (GG) as a solution before (Sb) or after (Sa) heat treatment	60
10.	pH development during fermentation of non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as a powder (P) or as solution before (Sb) heat treatment	65
11.	pH of non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as powder (P) and solution before (Sb) heat treatment	67
12.	Acidity (%) of non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as powder (P) and solution before (Sb) heat treatment	69
13.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as powder (P) and solution before (Sb) heat treatment	71
14.	Viscosity (Cp) of non-fat yoghurt as affected by adding different	73

	concentrations of locust bean gum (LBG) as a powder (P) and solution before (Sb) heat treatment	
15.	Water holding capacity (%) of non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as a powder (P) and solution before (Sb) heat treatment	75
16.	Curd syneresis(%) of fresh non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as powder (P) and solution before (Sb) heat treatment	76
17.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as powder (P) and as solution before (Sb) heat treatment	77
18.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding different concentrations of locust bean gum (LBG) as powder (P)and solution before (Sb) heat treatment	78
19.	pH development during fermentation of non-fat non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) or as a solution before (Sb) heat treatment	83
20.	pH of non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	85
21.	Acidity (%) of non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	87
22.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	89
23.	Viscosity (Cp) of non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	91
24.	Water holding capacity (%) of non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	92
25.	Curd syneresis (%) of fresh non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	94
26.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	95
27.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding different concentrations of xanthan gum (XG) as a powder (P) and solution before (Sb) heat treatment	96
28.	pH development during fermentation of non-fat yoghurt as affected by adding different concentration of sodium alginate (SA) as a	100

	solution before (Sb) or after (Sa) heat treatment	
29.	pH of non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as a solution before (Sb) or after (Sa) heat treatment	102
30.	Acidity (%) of non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as solution before (Sb) or after (Sa) heat treatment	104
31.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as a solution before (Sb) or after (Sa) heat treatment	105
32.	Viscosity (Cp) of non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as a solution before (Sb) and after (Sa) heat treatments	107
33.	Water holding capacity (%) of non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as a solution before (Sb) or after (Sa) heat treatment	109
34.	Curd syneresis (%) of fresh non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as solution before (Sb) or after (Sa) heat treatment	110
35.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as solution before (Sb) or after (Sa) heat treatment	111
36.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding different concentrations of sodium alginate (SA) as solution before (Sb) or after (Sa) heat treatment	112
37.	pH development during fermentation of non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	114
38.	pH of non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	115
39.	Acidity (%) of non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	117
40.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	118
41.	Viscosity (Cp) of non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	120
42.	Water holding capacity (%) of non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	121

43.	Curd syneresis (%) of fresh non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	123
44.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	123
45.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	125
46.	pH development during fermentation of non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	130
47.	pH of non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	131
48.	Acidity (%) of non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	132
49.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	134
50.	Viscosity (Cp) of non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) and sodium alginate (SA) by different concentrations	136
51.	Water holding capacity (%) of non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) and sodium alginate (SA) by different concentrations	137
52.	Curd syneresis (%) of fresh non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	138
53.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding locust bean gum (LBG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	139
54.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding xanthan gum (XG) mixed with guar gum (GG) or sodium alginate (SA) by different concentrations	140
55.	pH development during fermentation of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	146
56.	pH values of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	148
57.	Acidity (%) of non-fat yoghurt as affected by adding	149

	exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	
58.	Acetaldehyde content ($\mu\text{mole}/100\text{g}$) of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	150
59.	Viscosity (Cp) of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	152
60.	Water holding capacity (%) of non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	153
61.	Curd syneresis (%) of fresh non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	154
62.	Curd syneresis (%) of stored (3 days) non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	154
63.	Curd syneresis (%) of stored (7 days) non-fat yoghurt as affected by adding exopolysaccharides producing culture (EPS) with yoghurt culture (YC) at different temperatures	155

ABSTRACT

Yoghurt is one of the most widely consumed fermented dairy products. Non-fat yoghurt always suffers from weak body and texture, as well as high syneresis. The objective of this study is to improve the body and texture of non-fat yoghurt by using different concentrations of some hydrocolloids (guar gum (GG), locust bean gum (LBG), xanthan gum (XG) and sodium alginate (SA) added to yoghurt milk as a powder, solutions before or after heat treatment (P, Sb or Sa in order). In addition, different concentrations of LBG or XG mixed with GG or SA moreover; Exopolysaccharides producing culture (EPS) incubated at different temperatures were used. The results revealed that 0.3% of GG and SA while 0.01% of LBG and XG can be used as a Sb to achieve the best sensory properties and highest viscosity while lowest curd syneresis (CS). On the other hand, 0.0035% of LBG or XG can be mixed with 0.15% SA to improve the sensory evaluation and increase the activity of the used culture, moreover to achieve higher viscosity, WHC and lower CS compared to using them alone. On the other hand, using a combination of EPS and YC starter culture (1:1) at 42°C followed by 45°C achieved the highest viscosity, water holding capacity and sensory attributes with the lowest CS.
