## https://doi.org/10.5564/mjc.v23i49.1404

Appendix - All the experiments were replicated three times in comparison with the standard *Lb. plantarum* strain P8 in the present study. The analysis of variance (ANOVA) was performed using IBM SPSS statistics 25 programme software.

Table 1. The ANOVA of chemical compounds in the *Khoormog* samples.

		ANO	VA			
		Sum of Squares	df	Mean Square	F	Sig.
pН	Between Groups	12.997	12	1.083	248.329	.000
	Within Groups	.113	26	.004	77	
	Total	13.111	38		.0	
Titratable	Between Groups	54495.231	12	4541.269	22882.364	.000
Acidity	Within Groups	5.160	26	.198		
	Total	54500.391	38			
Lactose	Between Groups	49.419	12	4.118	365.027	.000
	Within Groups	.293	26	.011		
	Total	49.712	38			
Lactic	Between Groups	6758235.992	12	563186.333	51109.405	.000
Acid	Within Groups	286.500	26	11.019		
	Total	6758522.492	38	CA.,		
Acetic	Between Groups	119064.840	12	9922.070	58365.118	.000
Acid	Within Groups	4.420	26	.170		
	Total	119069.260	38			
			-			

Table 2. The ANOVA of cholesterol lowering ability, BSH activity on sodium taurocholate, cholesterol precipitation with deconjugation of sodium taurocholate and Caco-2 Cell adhesiveness of the 8 isolates.

Lowering cholesterol   Between Groups   4937.470   8   617.184   43.733   .000		7	ANOVA				
Between Groups   4937.470   8   617.184   43.733   .000	<u> </u>		Sum of Squares	df	Mean	F	Sig.
Within Groups         254.024         18         14.112           Total         5191.493         26           BSH activity on sodium taurocholate         Between Groups         2.397         8         .300         14.720         .000           Sodium taurocholate         Within Groups         .366         18         .020           Total         2.763         26           Precipitated cholesterol by deconjugation of sodium taurocholate         Within Groups         .879         18         .049           Total         1.228         26           Caco2-Cell adhesiveness         Between Groups         2.738         8         .342         48.901         .000					Square		
Total   5191.493   26	Lowering cholesterol	Between Groups	4937.470	8	617.184	43.733	.000
BSH activity on sodium taurocholate         Between Groups         2.397         8         .300         14.720         .000           Total         2.763         26           Precipitated cholesterol by deconjugation of sodium taurocholate         Between Groups         .350         8         .044         .896         .540           Total         1.228         26           Caco2-Cell adhesiveness         Between Groups         2.738         8         .342         48.901         .000		Within Groups	254.024	18	14.112		
Sodium taurocholate         Within Groups         .366         18         .020           Total         2.763         26           Precipitated cholesterol by deconjugation of sodium taurocholate         Between Groups         .350         8         .044         .896         .540           Total         1.228         18         .049         .000         .000           Caco2-Cell adhesiveness         Between Groups         2.738         8         .342         48.901         .000		Total	5191.493	26			
Total   2.763   26	BSH activity on	Between Groups	2.397	8	.300	14.720	.000
Precipitated cholesterol by deconjugation of sodium taurocholate         Between Groups         .350         8         .044         .896         .540           Total         1.228         26           Caco2-Cell adhesiveness         Between Groups         2.738         8         .342         48.901         .000	sodium taurocholate	Within Groups	.366	18	.020		
deconjugation of sodium taurocholate         Within Groups         .879         18         .049           Total         1.228         26           Caco2-Cell adhesiveness         Between Groups         2.738         8         .342         48.901         .000		Total	2.763	26			
taurocholate         Total         1.228         26           Caco2-Cell adhesiveness         Between Groups         2.738         8         .342         48.901         .000	Precipitated cholesterol by	Between Groups	.350	8	.044	.896	.540
Caco2-Cell adhesiveness Between Groups 2.738 8 .342 48.901 .000	deconjugation of sodium	Within Groups	.879	18	.049		
	taurocholate	Total	1.228	26			
Within Groups .126 18 .007	Caco2-Cell adhesiveness	Between Groups	2.738	8	.342	48.901	.000
1		Within Groups	.126	18	.007		
Total 2.864 26		Total	2.864	26			

Table 3 (1). The ANOVA of production starter culture activity of *Lb. plantarum* AM2-6, BM2-5 and P8, recorded by pH in 2h, 4h, 6h, 8h fermentation.

		AN	OVA			
		Sum of Squares	df	Mean Square	F	Sig.
pH 2h	Between Groups	.042	2	.021	3.800	.086
	Within Groups	.033	6	.006		
	Total	.076	8			
pH 4h	Between Groups	.167	2	.083	15.000	.005
	Within Groups	.033	6	.006		
	Total	.200	8			
pH 6h	Between Groups	.042	2	.021	9.500	.014
	Within Groups	.013	6	.002		
	Total	.056	8		×	0
pH 8h	Between Groups	.009	2	.004	1.000	.422
	Within Groups	.027	6	.004	0//	
	Total	.036	8		.00	

Table 3 (2). The ANOVA of production starter culture activity of *Lb. plantarum* AM2-6, BM2-5 and P8, recorded by titratable acidity in 2h, 4h, 6h, 8h fermentation.

	ANOVA		71		
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19.980	2	9.990	187.312	.000
Within Groups	.320	6	.053		
Total	20.300	8			
Between Groups	176.722	2	88.361	4970.312	.000
Within Groups	.107	6	.018		
Total	176.829	8			
Between Groups	62.176	2	31.088	104.399	.000
Within Groups	1.787	6	.298		
Total	63.962	8			
Between Groups	25.536	2	12.768	23.451	.001
Within Groups	3.267	6	.544		
Total	28.802	8			
	Within Groups Total Between Groups Within Groups	Sum of Squares           Between Groups         19.980           Within Groups         .320           Total         20.300           Between Groups         176.722           Within Groups         .107           Total         176.829           Between Groups         62.176           Within Groups         1.787           Total         63.962           Between Groups         25.536           Within Groups         3.267	Sum of Squares         df           Between Groups         19.980         2           Within Groups         .320         6           Total         20.300         8           Between Groups         176.722         2           Within Groups         .107         6           Total         176.829         8           Between Groups         62.176         2           Within Groups         1.787         6           Total         63.962         8           Between Groups         25.536         2           Within Groups         3.267         6	Between Groups         19.980         2         9.990           Within Groups         .320         6         .053           Total         20.300         8           Between Groups         176.722         2         88.361           Within Groups         .107         6         .018           Total         176.829         8           Between Groups         62.176         2         31.088           Within Groups         1.787         6         .298           Total         63.962         8           Between Groups         25.536         2         12.768           Within Groups         3.267         6         .544	Sum of Squares         df         Mean Square         F           Between Groups         19.980         2         9.990         187.312           Within Groups         .320         6         .053           Total         20.300         8           Between Groups         176.722         2         88.361         4970.312           Within Groups         .107         6         .018           Total         176.829         8           Between Groups         62.176         2         31.088         104.399           Within Groups         1.787         6         .298           Total         63.962         8           Between Groups         25.536         2         12.768         23.451           Within Groups         3.267         6         .544

Table 4. The ANOVA of tastes determination of sourness by Taste Sensing System in different fermentation temperature.

		ANOV	Α			
		Sum of Squares	df	Mean Square	F	Sig.
BM2-5	Between Groups	222.000	4	55.500	29838.710	.000
	Within Groups	.019	10	.002		
	Total	222.019	14			
AM2-6	Between Groups	122.400	4	30.600	6954.545	.000
	Within Groups	.044	10	.004		
	Total	122.444	14			
Lb. plantarum	Between Groups	44.400	4	11.100	2557.604	.000
P8	Within Groups	.043	10	.004		
	Total	44.443	14			

Table 5(1). The ANOVA of water holding capacity of the fermented milk produced by *Lb. plantarum* starter cultures of AM2-6, BM2-5 and P8 in different fermentation temperature (pH 4.6).

ANOVA								
		Sum of Squares	df	Mean Square	F	Sig.		
BM2-5	Between Groups	60.684	4	15.171	1896.375	.000		
	Within Groups	.080	10	.008				
	Total	60.764	14					
AM2-6	Between Groups	74.376	4	18.594	387.375	.000		
	Within Groups	.480	10	.048				
	Total	74.856	14					
Lb. plantarum	Between Groups	28.716	4	7.179	326.318	.000		
P8	Within Groups	.220	10	.022				
	Total	28.936	14		X	0		

Table 5(2). The ANOVA of water holding capacity of the fermented milk produced by *Lb. plantarum* starter cultures of AM2-6, BM2-5 and P8 at 43°C of fermentation (pH 4.6).

		ANO				
		Sum of Squares	df	Mean Square	F	Sig.
43°C	Between Groups	38.220	2	19.110	573.300	.000
	Within Groups	.200	6	.033		
	Total	38.420	8	5		

Table 6. The ANOVA of tastes determination of sourness by Taste Sensing System in different inoculum.

		ANOV	Ά			
		Sum of Squares	df	Mean Square	F	Sig.
BM2-5	Between Groups	102.000	4	25.500	8673.469	.000
	Within Groups	.029	10	.003		
	Total	102.029	14			
AM2-6	Between Groups	78.000	4	19.500	2945.619	.000
	Within Groups	.066	10	.007		
	Total	78.066	14			
Lb. plantarum P8	Between Groups	30.000	4	7.500	2083.333	.000
	Within Groups	.036	10	.004		
	Total	30.036	14			

Table 7(1). The ANOVA of water holding capacity of the fermented milk produced by *Lb. plantarum* starter cultures of AM2-6, BM2-5 and P8 in different inoculum (pH 4.6).

		ANOVA				
		Sum of Squares	df	Mean	F	Sig.
				Square		
BM2-5	Between Groups	58.644	4	14.661	407.250	.000
	Within Groups	.360	10	.036		
	Total	59.004	14			
AM2-6	Between Groups	93.936	4	23.484	469.680	.000
	Within Groups	.500	10	.050		. \
	Total	94.436	14			1/1
Lb. plantarum P8	Between Groups	127.776	4	31.944	1774.667	.000
	Within Groups	.180	10	.018		O
	Total	127.956	14			9

Table 7(2). The ANOVA of water holding capacity of the fermented milk produced by *Lb. plantarum* starter cultures of AM2-6, BM2-5 and P8 at inoculum of 3 g/100 g and 5 g/100 g (pH 4.6).

	*			0 0 1	<u> </u>	
		ANOVA		VD,		
		Sum of Squares	df	Mean Square	F	Sig.
3 g/100 g	Between Groups	73.580	2	36.790	849.000	.000
	Within Groups	.260	6	.043		
	Total	73.840	8			
5 g/100 g	Between Groups	1.860	2	.930	69.750	.000
	Within Groups	.080	6	.013		
	Total	1.940	8			