

Table(1): Total viable counts and total viable counts of *lactobacilli* in probiotic Kishk during storage at room temperature.

Treat.*	Storage period (days)												
	Fresh	20	40	60	80	100	Fresh	20	40	60	80	100	V(%)**
	Total viable count (log cfu /gm)						Total viable count of lactobacilli (log cfu/gm)						
C	7.20	6.35	6.64	6.54	6.31	5.68	7.56	6.23	5.16	4.87	4.10	3.50	0.008
BA	7.51	7.12	6.84	6.30	6.36	6.30	7.80	7.63	6.86	5.84	5.70	5.71	0.89
SA	6.40	5.70	4.45	4.30	4.40	4.30	7.38	7.48	6.48	6.40	6.32	5.30	0.81
BS	7.46	6.83	6.52	6.58	6.50	6.48	7.10	6.79	5.10	5.32	5.27	4.77	0.77
SW	7.19	6.23	5.13	5.10	5.14	5.12	7.10	6.38	5.20	5.17	5.11	4.88	0.28

* Treatments:

C: Soaked burghul + Laban El Zeer at ratio 2: 1(control)

BA: Soaked burghul + acidophilic milk at ratio 2: 1

SA: Soybean dough + Acidophilic milk at ratio 2: 1

BS: Soaked burghul + acidophilic soymilk at ratio 2: 1

SW: Soybean dough + acidophilic whey at ratio 2: 1

** V (%): % viable cells of lactobacilli after 100 days.

Table(3): Changes in the total solids , ash and crude fibers contents of probiotic Kishk during storage period .

Parameter	Treat.*	Storage period (days) at 20 ± 2 ⁰ C							Storage period (days) at 37 ⁰ C						
		Fresh	15	30	45	60	90	120	fresh	15	30	45	60	90	120
Total solids (%)	C	90.02	90.29	90.51	90.57	90.98	91.11	91.04	90.02	90.19	90.35	90.57	91.00	91.68	92.12
	BA	92.19	92.53	92.74	92.81	93.01	93.27	93.27	92.19	92.51	92.83	92.90	93.26	93.29	93.72
	SA	91.89	92.30	92.43	92.69	93.03	93.04	93.96	91.89	92.02	92.15	92.73	93.62	93.57	94.09
	BS	91.32	91.87	91.91	92.13	92.18	92.62	92.99	91.32	91.92	92.52	92.49	92.64	92.81	93.06
	SW	90.74	90.98	91.15	91.62	92.16	92.56	92.68	90.74	90.56	91.24	91.97	92.56	92.69	92.91
Ash (%)	C	5.023	5.401	5.483	5.858	6.182	6.863	6.923	5.023	5.343	5.662	6.169	6.908	7.223	7.442
	BA	6.084	6.138	6.217	6.536	6.822	7.175	7.746	6.084	6.134	6.184	6.346	6.519	6.706	6.808
	SA	6.656	6.879	6.882	7.833	7.800	7.843	7.932	6.656	7.057	7.462	7.713	7.849	7.933	7.975
	BS	10.190	10.362	10.589	10.626	10.972	11.165	11.385	10.190	10.458	10.729	10.736	10.841	11.353	11.892
	SW	8.092	7.291	8.294	8.337	8.410	8.479	8.911	8.092	8.446	8.354	8.626	8.709	8.582	9.076
Crude fibers (%)	C	2.254	2.274	2.280	2.271	2.300	2.300	2.311	2.254	2.249	2.244	2.265	2.275	2.284	2.295
	BA	2.479	2.485	2.500	2.523	2.524	2.526	2.538	2.479	2.469	2.459	2.483	2.497	2.503	2.514
	SA	1.033	1.043	1.050	1.060	1.063	1.065	1.076	1.033	1.032	1.032	1.034	1.048	1.060	1.062
	BS	2.303	2.318	2.323	2.321	2.340	2.349	2.359	2.303	2.302	2.301	2.309	2.321	2.329	2.340
	SW	1.118	1.139	1.149	1.151	1.152	1.154	1.158	1.118	1.115	1.112	1.129	1.148	1.150	1.151

* treatments

Table (4): Changes in the ether extract, total nitrogen and water soluble nitrogen contents in probiotic Kishk during storage period .

Parameter	Treat.*	Storage period (days) at 20 ± 2 ⁰ C							Storage period (days) at 37 ⁰ C						
		fresh	15	30	45	60	90	120	fresh	15	30	45	60	90	120
Ether extract (%)	C	0.16	0.16	0.16	0.16	0.17	0.18	0.18	0.16	0.17	0.18	0.19	0.19	0.20	0.21
	BA	0.14	0.15	0.15	0.15	0.16	0.16	0.17	0.14	0.15	0.16	0.18	0.19	0.20	0.20
	SA	0.35	0.35	0.35	0.36	0.37	0.38	0.30	0.35	0.37	0.38	0.40	0.40	0.41	0.43
	BS	0.16	0.17	0.17	0.17	0.18	0.19	0.19	0.16	0.18	0.19	0.20	0.20	0.22	0.23
	SW	0.32	0.33	0.33	0.33	0.34	0.35	0.35	0.32	0.34	0.35	0.37	0.38	0.40	0.41
Total nitrogen (%)	C	2.56	2.59	2.6	2.61	2.64	2.66	2.68	2.56	2.63	2.65	2.70	2.71	2.73	2.74
	BA	2.37	2.39	2.40	2.43	2.47	2.49	2.51	2.37	2.45	2.50	2.51	2.55	2.58	2.60
	SA	5.30	5.31	5.31	5.35	5.39	5.40	5.42	5.30	5.37	5.40	5.43	5.46	5.49	5.50
	BS	2.23	2.26	2.28	2.31	2.35	2.36	2.40	2.23	2.34	2.37	2.40	2.42	2.45	2.46
	SW	5.19	5.25	5.32	5.35	5.40	5.47	5.50	5.19	5.37	5.43	5.50	5.53	5.58	5.60
Water soluble nitrogen (%)	C	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.17	0.19	0.20	0.21	0.22	0.22	0.23
	BA	0.59	0.60	0.60	0.62	0.65	0.68	0.70	0.59	0.64	0.67	0.71	0.73	0.74	0.76
	SA	0.32	0.33	0.33	0.34	0.36	0.39	0.40	0.32	0.35	0.38	0.40	0.41	0.42	0.43
	BS	0.33	0.35	0.35	0.37	0.40	0.42	0.43	0.33	0.38	0.41	0.44	0.46	0.47	0.48
	SW	0.60	0.60	0.61	0.63	0.66	0.68	0.69	0.60	0.64	0.67	0.70	0.71	0.72	0.75

* treatments

Table (5): Changes in the sugar contents of probiotic Kishk during storage period.

Parameter	Treat.*	Storage period (days) at 20 ± 2° C							Storage period (days) at 37° C						
		fresh	15	30	45	60	90	120	fresh	15	30	45	60	90	120
Total sugar (%)	C	10.23	10.19	10.15	10.11	10.04	10.02	9.98	10.23	10.19	10.17	10.11	10.08	10.03	10.00
	BA	13.20	13.16	13.09	13.04	12.97	12.94	12.88	13.20	13.14	13.11	13.02	13.00	12.98	12.91
	SA	14.52	14.45	14.39	14.04	12.97	12.94	12.88	14.52	14.50	14.42	14.35	14.27	14.24	14.17
	BS	19.34	19.27	19.20	19.16	19.07	19.07	19.00	19.34	19.30	19.23	19.17	19.11	19.10	19.03
	SW	14.15	14.10	14.04	14.00	13.90	13.88	13.80	14.15	14.11	14.08	13.97	13.95	13.91	13.85
Non reducing sugar (%)	C	9.78	9.70	9.62	9.52	9.43	9.32	9.18	9.78	9.68	9.63	9.55	9.42	9.30	9.13
	BA	12.73	12.65	12.53	12.44	12.34	12.23	12.05	12.73	12.61	12.52	12.41	12.33	12.23	12.01
	SA	13.78	13.67	13.56	13.14	12.00	12.20	11.77	13.78	13.68	13.52	13.42	13.37	13.17	13.00
	BS	18.88	18.70	18.63	18.55	18.41	17.56	18.15	18.88	18.76	18.63	18.53	18.42	18.31	18.11
	SW	13.45	13.33	13.18	13.06	12.95	12.83	12.68	13.45	13.32	13.20	13.06	12.97	12.82	12.65
Reducing sugar (%)	C	0.45	0.49	0.53	0.59	0.61	0.70	0.80	0.45	0.51	0.54	0.56	0.66	0.73	0.87
	BA	0.47	0.51	0.56	0.60	0.63	0.71	0.83	0.47	0.53	0.59	0.61	0.67	0.75	0.90
	SA	0.74	0.78	0.83	0.90	0.97	1.02	1.11	0.74	0.82	0.90	0.93	0.99	1.07	1.17
	BS	0.46	0.50	0.57	0.61	0.66	0.75	0.85	0.46	0.53	0.60	0.64	0.69	0.79	0.92
	SW	0.70	0.77	0.86	0.94	0.95	1.05	1.12	0.70	0.79	0.88	0.91	0.98	1.09	1.20

*treatments

Table (6): Changes in titratable acidity (%), pH and absorbance at 420 nm of probiotic Kishk during storage period.

Parameter	Treat.*	Storage period (days) at 20 ± 2 ⁰ C							Storage period (days) at 37 ⁰ C						
		fresh	15	30	45	60	90	120	fresh	15	30	45	60	90	120
Titratable acidity (%)	C	1.105	1.125	1.145	1.211	1.200	1.286	1.409	1.105	1.138	1.170	1.178	1.264	1.337	1.446
	BA	2.249	2.411	2.419	2.571	2.680	2.732	2.893	1.230	1.579	1.928	1.930	1.948	2.249	2.571
	SA	1.230	1.600	1.760	1.928	1.940	2.089	2.411	2.249	2.416	2.583	2.600	2.732	2.750	2.893
	BS	0.643	0.804	0.804	0.964	1.410	1.125	2.148	0.643	1.804	0.964	1.111	1.140	1.175	2.090
	SW	1.446	1.920	2.000	2.169	2.200	2.560	2.732	1.446	1.763	2.080	2.169	2.289	2.532	2.732
pH	C	4.02	4.00	3.90	3.80	3.80	3.85	3.85	4.02	3.96	3.90	3.82	3.80	3.80	4.00
	BA	3.90	3.91	3.90	3.85	3.85	3.90	3.95	3.90	3.88	3.85	3.80	3.80	3.85	3.80
	SA	5.00	4.95	4.90	4.95	4.90	4.90	4.86	5.00	4.98	4.95	3.90	4.90	4.85	4.80
	BS	4.70	4.65	4.60	4.58	4.55	4.45	4.40	4.70	4.67	4.65	3.55	4.50	4.42	4.40
	SW	4.70	4.60	4.65	4.60	4.65	4.62	4.68	4.70	4.65	4.60	3.62	4.65	4.70	4.65
Absorbance at 420 nm	C	0.040	0.046	0.089	0.102	0.189	0.204	0.218	0.040	0.095	0.102	0.161	0.200	0.212	0.240
	BA	0.073	0.085	0.112	0.218	0.238	0.269	0.423	0.073	0.100	0.117	0.240	0.234	0.408	0.493
	SA	0.096	0.130	0.195	0.288	0.418	0.515	0.588	0.096	0.172	0.248	0.370	0.454	0.532	0.606
	BS	0.078	0.121	0.129	0.223	0.252	0.306	0.366	0.078	0.124	0.170	0.244	0.280	0.318	0.375
	SW	0.158	0.175	0.267	0.385	0.508	0.768	0.547	0.158	0.262	0.366	0.490	0.570	0.869	0.941

* treatments