

APPENDIX

Ap. 9.1 Developed Titratable Acidity (DTA), pH and Curd Strength (CS) properties of soycurd incubated at 40°C with different source of "dahi" culture.

DURATION	CURD INCUBATED AT 40° C											
	SOURCE - I			SOURCE - II			SOURCE - III			SOURCE - IV		
	DTA	pH	CS	DTA	pH	CS	DTA	pH	CS	DTA	pH	CS
4 hours												
Mean	0.18	5.50	-		5.34	-	0.14	5.98	-	0.22	5.16	-
± SD	0.05	0.04		0.044	0.02		0.03	0.05		0.01	0.10	
Range	0.14-0.25	5.4-5.5		0.16-0.25	5.32-5.36		0.11-0.18	5.9-6		0.21-0.23	5-5.2	
6 hours												
Mean	0.31	4.91		0.28	4.82		0.30	4.83		0.23	4.93	
± SD	0.03	0.03		0.001	0.03		0.04	0.03		0.01	0.07	
Range	0.28-0.35	4.8-4.9		0.27-0.3	4.82-4.86		0.25-0.34	4.8-4.85		0.22-0.24	4.9-4.95	
8 hours												
Mean	0.35	4.75	19.20	0.34	4.78	22.60	0.35	4.72	20.30	0.28	4.85	25.10
± SD	0.034	0.05	4.48	0.01	0.02	2.50	0.04	0.02	3.05	0.01	0.06	3.43
Range	0.33-0.39	4.75-4.78	14-22	0.33-0.35	4.7-4.8	22-25	0.3-0.39	4.7-4.8	17-23	0.27-0.29	4.8-4.9	21-28
10 hours												
Mean	0.36	4.64	20.90	0.36	4.67	26.70	0.39	4.77	22.40	0.33	4.75	27.30
± SD	0.014	0.08	4.36	0.01	0.02	4.90	0.02	0.08	1.51	0.015	0.061	2.08
Range	0.35-0.38	4.5-4.7	17-25	0.35-0.37	4.6-4.7	21-30	0.37-0.41	4.7-4.8	21-24	0.32-0.35	4.73-4.79	25-29
12 hours												
Mean	0.37	4.59	22.40	0.37	4.63	28.50	0.38	4.71	25.70	0.35	4.72	28.90
± SD	0.011	0.03	3.83	0.02	0.04	3.12	0.01	0.05	1.11	0.01	0.07	4.20
Range	0.36-0.38	4.5-4.6	18-25	0.35-0.39	4.6-4.7	25-31	0.37-0.4	4.6-4.7	25-27	0.34-0.39	4.75-4.71	24-31.6
14 hours												
Mean	0.39	4.55	25.20	0.44	4.60	30.70	0.34	4.66	28.30	0.37	4.68	31.20
± SD	0.044	0.05	4.85	0.05	0.04	4.16	0.055	0.05	3.94	0.02	0.02	5.20
Range	0.35-0.44	4.5-4.6	20-25	0.39-49	4.05-4.6	26-31	0.28-0.39	4.6-4.7	25.33	0.35-0.39	4.65-4.7	26-36.5

Note : Mean values represent the average of determinants in three independent tests.

Ap.9.2 Developed Titratable Acidity (DTA), pH and Curd Strength (CS) properties of soycurd incubated at 32°C with different source of "dahi" culture.

DURATION	CURD INCUBATED AT 32°C														
	SOURCE - I			SOURCE - II			SOURCE - III			SOURCE - IV			SOURCE - V		
	DTA	pH	CS	DTA	pH	CS	DTA	pH	CS	DTA	pH	CS	DTA	pH	CS
4 hours															
Mean	0.09	6.00		0.14	6.00		0.10	5.90		0.13	6.00		0.10	6.01	
+ SD	0.001	0.13	-	0.04	0.12	-	0.02	0.05	-	0.04	0.03	-	0.01	0.08	-
Range	0.09-0.1	5.9-6.1		0.11-0.2	5.9-6.1		0.08-0.12	5.9-5.6		0.1-0.19	5.9-6.0		0.09-0.12	5.9-6.1	
6 hours															
Mean	0.23	5.20		0.30	4.95		0.27	5.00		0.24	5.30		0.24	5.72	
+ SD	0.04	0.29	-	0.02	0.06	-	0.001	0.09	-	0.036	0.07	-	0.021	0.12	-
Range	0.22-0.25	5.0-5.5		0.30-0.32	4.9-5.0		0.26-0.28	5.0-5.1		0.2-0.3	5.3-5.4		0.23-0.26	5.6-5.8	
8 hours															
Mean	0.27	5.06	8.40	0.32	4.82	14.50	0.31	5.00	9.50	0.28	4.97	13.10	0.28	5.15	7.70
+ SD	0.02	0.34	2.20	0.02	0.07	3.23	0.01	0.07	1.94	0.02	0.03	2.38	0.01	0.08	0.83
Range	0.25-0.29	4.8-5.4	7-11	0.31-0.35	4.8-4.9	11-18	0.31-0.32	4.9-5.0	7.3-11.0	0.25-0.3	4.9-5.1	11-16	0.27-0.29	5.1-5.3	7.3-8.7
10 hours															
Mean	0.31	4.80	13.30	0.34	4.70	22.10	0.32	4.90	22.90	0.32	4.93	20.20	0.32	4.95	12.50
+ SD	0.01	0.20	4.04	0.02	0.04	3.00	0.001	0.05	6.31	0.015	0.03	2.84	0.01	0.08	1.28
Range	0.3-0.32	4.6-5.0	11-18	0.32-0.37	4.6-4.7	19-25	0.3-0.332	4.8-4.9	15-26	0.31-0.34	4.8-5.0	17-22.5	0.31-0.33	4.9-5.0	11.6-12.0
12 hours															
Mean	0.33	4.17	21.50	0.37	4.67	25.60	0.33	4.82	25.30	0.35	4.83	20.90	0.35	4.73	19.80
+ SD	0.04	0.17	4.70	0.02	0.036	2.30	0.18	0.05	3.78	0.001	0.03	5.80	0.01	0.02	2.55
Range	0.32-0.35	4.5-4.8	17-26	0.36-0.39	4.6-4.7	23-27	0.33-0.34	4.8-4.9	21-28	0.34-0.36	4.7-4.8	15-26.6	0.34-0.36	4.6-4.8	17-22
14 hours															
Mean	0.39	4.55	28.70	0.39	4.60	29.40	0.34	4.72	26.80	0.36	4.79	24.50	0.36	4.71	23.50
+ SD	0.10	0.70	3.30	0.06	0.077	3.97	0.09	0.10	5.78	0.01	0.10	5.85	0.04	0.09	5.35
Range	0.29-0.49	4.4-4.7	25-31	0.33-0.45	4.5-4.6	25-30.6	0.25-0.44	4.6-4.8	23-33	0.37-0.46	4.7-4.9	19.6-31.0	0.3-0.43	4.6-4.8	17.6-28.0

Note : Mean values represent the average of determinants in three independent tests.

Ap.9.3 Synerisis properties of soycurd with different source of dahi cultures incubated at 32°C for 12 and 14 hrs.

DURATION OF DRAINING	QUANTITY OF WHEY DRAINED FROM CURD SET AT 32°C FOR 12 & 14 HRS									
	SOURCE - I		SOURCE - II		SOURCE - III		SOURCE - IV		SOURCE - V	
	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs
0.30 min										
Mean	38.84	32.00	39.17	33.33	32.17	33.16	39.17	39.5	38.17	36.66
•S D	7.5	3.46	5.22	1.01	6.06	5.36	7.23	1.73	8.7	3.06
Range	34-47.5	30-36	35-45	32-34	27.5-39	28-36	34-47.5	33-35	31.5-35	35-37.5
1 hrs										
Mean	47.84	42.16	45	40.00	38.84	41.83	46.5	42.16	44.84	44.16
•S D	8.5	5.05	6.27	3.0	4.45	6.8	7.36	3.89	7.4	10.4
Range	41-57.5	41-51	37.5-52	38-40	36-44	34-46	42-55	40-44	37.5-52	40-50
1 hrs 30 min										
Mean	52.17	45.66	51.17	43	43.84	47.16	50.67	46.33	50.89	48.16
•S D	6	5.29	5.72	0.86	4.62	7.09	6.84	3.66	6.27	9.12
Range	47.5-59	41-51	45-51	42-44	40-49	39-51	46-58.5	45-49	45-57.5	44-53
2 hrs										
Mean	54.67	49	53.39	46.33	47.34	50	52.84	47.66	52.67	50.33
•S D	5	5.9	5.15	1.44	2.46	6.61	5.36	4.61	5.86	2.14
Range	50-60	45-55	47.5-59	45-48	45-50	42-55	49-59	47.5-50	47.5-59	48-52.5
2 hrs 30 min										
Mean	56	51	55.67	49.6	49.67	52	54.17	49.16	54.67	51.33
•S D	5.5	2.31	4.21	0.56	2.08	4.27	5.22	4.61	6.05	5.59
Range	50.5-61.5	48-56	50-60	46-51	47.5-51	47-56	50-60	41-51.5	49-61	49-55
3 hrs										
Mean	57.34	52	56.84	49.83	50.89	54.16	56.34	50.8	56.34	52
•S D	4.9	5.19	3.06	2.41	0.9	5.22	4.61	2.7	5.5	5.29
Range	52.5-62.5	49-58	52.5-61.5	41-53	50.5-52	50-60	52-61.5	50-52.5	50.5-61.5	50-55
3 hrs 30 min										
Mean	59.17	52.5	58.17	51	52.17	54.16	57.67	52	57.67	54.66
•S D	4.4	49.58	3.36	3.04	0.7	5.22	4.28	2.64	4.83	5.14
Range	55.5-64	4.76	55-61	47-54	51.5-52.5	50-60	55-63	51-53.5	52-62	52-57

Cont....

Ap. 9.3 contd....

DURATION OF DRAINING	QUANTITY OF WHEY DRAINED FROM CURD SET AT 32°C FOR 12 & 14 HRS									
	SOURCE - I		SOURCE - II		SOURCE - III		SOURCE - VI		SOURCE - V	
	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs
4 hrs										
Mean	60	53.5	58.84	51.16	53	54.16	58.5	52.66	58.67	54.65
•S D	4.5	5.67	3.36	3.65	0.5	5.22	4.09	2.31	3.85	6.2
Range	56-65	49.5-60	55-61.5	47-55	52-54	50-60	55-63	51-53.5	54.5-62	52-57
4 hrs 30 min										
Mean	60.84	54	58.84	52.16	54.34	55.5	58.8	53.33	59.34	55
•S D	4.9	5.29	3.36	4.09	0.24	4.76	3.97	0.26	3.84	4.17
Range	57-66.5	50-60	55-61.5	48-56	54.5-56	52-61	55-60	52-54	55-62.5	53-57
5 hrs										
Mean	61.5	54.66	59.34	53.33	54.84	56.66	59.5	54	59.84	55.5
•S D	4.9	5.7	3.71	4.58	0.43	4.75	3.77	2	3.74	3
Range	57.5-67	50-61	55-61	48-56	54-55.5	53-62	56-63	53-55	56.5-62	54-57
5 hrs 30 min										
Mean	61.84	55.5	60	54.16	55.17	57	59.5	54.5	60.34	55.5
•S D	4.61	5.4	3.09	5.37	0.78	4.82	3.77	3	3.28	3.34
Range	58-67	51-61	48-57	56.5	54-55.5	53-62.5	55-60	53-56	56-62	54-57.5
6 hours										
Mean	62.34	55.5	60.5	54.16	55.34	57.33	59.67	54.5	60.84	56
•S D	4.02	5.4	3.04	5.88	0.55	4.61	3.55	3.9	2.83	3.6
Range	59.5-67	51-61	57-62.5	48-57	54-56.0	53-62.5	56-63	53-57	57-62.5	54-57.5

Note :- Mean values represent the average of determinants in three independent tests.

Ap. 9.4 Synerisis properties of soycurd with different source of dahi cultures incubated at 40°C for 12 and 14 hrs.

DURATION OF DRAINING	QUANTITY OF WHEY DRAINED FROM CURD SET AT 40°C FOR 12 & 14 HRS									
	SOURCE - I		SOURCE - II		SOURCE - III		SOURCE - VI		SOURCE - V	
	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs
0.30 min										
Mean	36.67	40.34	36.34	39.17	33.34	36.5	36.34	39.18	35.67	34.67
•S D	1.44	5.01	1.15	5.98	0.64	5.63	1.38	7.16	1.7	4.09
Range	32.5-42.5	35-45	35-39	35-46	27.5-40	30-40	31.5-45	33-47	29-42.5	30-37.5
1 hr										
Mean	43.34	49.17	41.39	47.34	39.17	41.5	43.67	45	42.84	39.84
•S D	1.08	5.32	1.35	7.75	0.28	5.76	0.81	9.5	1.47	2.71
Range	41-48	43-50	37-45	41-56	31-47.5	35-47	36-50	37-55	38.5-47.5	37-42.5
1 hrs 30 min										
Mean	48.34	52	48.34	49.34	43.17	45.5	46.17	49.34	46.67	43.84
•S D	0.95	6.08	1.6	8.11	0.57	7	1.29	7.92	1.44	3.37
Range	46-52.5	45-56	42-51.5	43-58	37.5-49.5	40-50	39-50	44-58.5	42.5-50	40-46.5
2 hrs										
Mean	50.84	54.34	47.84	51.84	46.17	48	48.34	50.84	49.17	46
•S D	0.64	4.58	1.68	7.89	1.19	5.07	0.91	8.02	1.15	2.64
Range	47.5-55	49-55	43-53.5	45-60.5	38.5-51	42.5-52.5	42.52	45.60	46.5-51	44-49
2 hrs 30 min										
Mean	52.67	55.5	49.5	53.17	47.5	50	50.84	52	50.5	48.17
•S D	0.28	3.5	1.8	7.16	1.32	4	1.35	8.18	1.22	1.67
Range	49.5-56	51-58	43-56	47-61	39.5-52	46-54	44-54	45-61	47.5-52	47-50
3 hrs										
Mean	53.84	56.5	50.17	54	48.67	50.67	52	54.17	52.17	49.5
•S D	0.28	4.09	1.78	6.24	1.38	3.09	1.41	7.1	1.03	1.8
Range	50-57.5	52-60	44-56.5	49-61	40-53	48-54	45-56	48-62	50-54	48-51.5
3 hrs 30 min										
Mean	54.84	57.17	51.34	54.67	50.17	51.5	53	55	52.67	50.67
•S D	0.28	3.72	1.75	6.07	1.38	2.29	1.41	6.24	1.15	1.26
Range	55-59	53-60	44-57.5	50-61	42.5-54	49-54	44.5-57.9	50-62	50-55	50-52

Cont ...

Ap. 9.4 contd...

DURATION OF DRAINING	QUANTITY OF WHEY DRAINED FROM CURD SET AT 40°C FOR 12 & 14 HRS									
	SOURCE - I		SOURCE - II		SOURCE - III		SOURCE - VI		SOURCE - V	
	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs	12 hrs	14 hrs
4 hrs										
Mean	55.89	57.67	51.67	56.17	50.67	52.34	53.5	55.34	54	51.5
•S D	0.28	3.25	1.7	5.6	1.47	2.46	1.41	6.08	1.09	1.32
Range	51.5-60	54-60	44-57.5	52-62	42.5-55	50-55	47.5-57.5	50-62	51.5-56.5	50-53
4 hrs 30 min										
Mean	56.67	58	51.84	56.34	51.34	52.67	54.17	55.84	54.67	52.17
•S D	0.64	2.64	1.68	5.36	1.52	2.14	1.47	6.26	1.03	2.14
Range	52-60.50	55-60	45-57.5	52-62	43-56	51-55	48-58.5	50-62.5	52.5-57	50.5-54.5
5 hrs										
Mean	56.84	58.5	52.17	56.84	52	53.11	54.5	56.34	54.84	52.67
•S D	0.57	2.29	1.78	4.87	1.58	1.48	1.58	5.59	1.08	2.14
Range	52.5-60.5	56-60	45-58.5	54-62	43-57	52-55	48-59.5	51-62.5	52.5-57.5	51-55
5 hrs 30 min										
Mean	57	58.5	52.74	57.5	52.67	54	55	56.5	55.17	53.5
•S D	0.5	2.29	1.82	4.33	1.55	1	1.5	5.59	1.03	2.7
Range	52.5-6	56-60.5	45-59	55-62	44.5-57.5	53-55	49-59.5	51-62.5	53-57.5	51-56.5
6 hrs										
Mean	57.17	58.5	52.67	57.84	53	54.5	55.67	56.84	55.5	54
•S D	0.41	2.29	1.84	4.03	1.5	1.32	1.47	5.48	1.0	3.0
Range	53-61	56-60.5	45-59.5	55-62	45-57.5	53-55	50-60	51.5-62.5	53.5-58	51-57

Note :- Mean values represent the average of determinants in three independent tests.

Ap. 9.5 Fortification of soymilk with fermentable sugars (Sucrose or whey or RSM or Lactose powder) on DTA, pH and Curd Strength

SUCROSE g/100 ml.		DTA (% I.a)	pH	C. S. (g)	WHEY (ml)	DTA (% I.a)	pH	C. S. (g)	RSM (ml)	DTA (% I.a)	pH	C. S. (g)	LACTOSE (g)	DTA (% I.a)	pH	C. S. (g)
0.25	mean	0.28	4.81	10.53*	2.5	0.35	4.95	19.82*	1.0	0.24	4.74	25.83	0.25	0.283	4	28.67
	•SD	0.0001	0.02	0.5		0.02	0.02	1.57		0.01	0.014	2.46		-	0.075	3.21
	Range	0.27-0.28	4.8-4.81	10-11		0.33-0.37	4.94-4.98	18-20.75		0.24-0.25	4.73-4.76	23-27.5		0.28-0.29	4-4.15	25.31
0.5	mean	0.29	4.72	10.17*	5.0	0.39	4.94	25.33	2.0	0.25	4.55	26.67	0.5	0.44	3.96	28.2
	•SD	0.02	0.01	0.5		0.04	0.036	1.52		0.01	0.002	0.28		0.02	0.017	1.86
	Range	0.27-31	4.71-4.73	9.6-10.5		0.37-0.4	4.91-4.98	24.27		0.23-0.25	4.55-4.56	26.5-27.0		0.41-0.46	3.95-3.98	26.3-30
0.75	mean	0.34	4.65	9.97*	7.5	0.4	4.84	24	3.00	0.29	4.43	26.63	0.75	0.44	3.88	27
	•SD		0.01	0.37		0.01	0.01	2.64		0.01	0.026	2.5		0.01	0.01	3.6
	Range	0.34-0.35	4.6-4.65	9.7-10.4		0.39-0.41	4.83-4.84	22-27		0.28-0.30	4.4-4.45	25.5-29.5		0.43-0.46	3.87-3.89	23-30
1.00	mean	0.35	4.6	10.03*	10.0	0.41	4.81	24.3	4.00	0.38	4.38	25.87	1.00	0.45	3.87	27.7
	•SD	0.01	0.01	0.28		0.02	0.01	1.52		0.01	0.014	3.38		0.01	0.02	3.51
	Range	0.34-0.36	4.58-4.6	9.7-10.2		0.39-0.43	4.8-4.82	23-26		0.37-0.39	4.37-4.4	23-29.6		0.44-0.47	3.85-3.89	24.31

Mean values represent the average of determinants in three independent tests

* denotes significant difference at 5% level compared to controls

Ap. 9.6 Fortification of soymilk with fermentable sugars (Sucrose with whey or RSM or Lactose powder) on DIA, pH and Curd Strength

SUCROSE(1%) WITH WHEY(ml)	DIA (% I.a)	pH	CURD STRENGTH (g)	SUCROSE(1%) WITH RSM(ml)	DIA (% I.a)	pH	CURD STRENGTH (g)	SUCROSE(1%) WITH LACTOSE(g%)	DIA (% I.a)	pH	CURD STRENGTH (g)
2.5 mean	0.45	4	28.33	1.0	0.37	4.56	26.83	0.25	0.41	4.08	35.67
SD	0.004	0.044	0.93		0.006	0.0081	0.4		0.008	0.081	0.7
Range	0.44-0.45	4.0-4.1	27.8-29.2		0.36-0.375	4.55-4.57	26.0-27.5		0.4-0.42	4.0-4.2	35.5-36.5
5.0 mean	0.5	3.9	28.53	2.0	0.41	4.47	28.78	0.5	0.47	3.94	35.52
SD	0.035	0.036	0.78		0.004	0.0081	0.2		0.008	0.042	0.4
Range	0.48-0.51	3.9-4.0	28.0-29.6		0.4-0.41	4.46-4.48	28.5-29.0		0.46-0.48	3.8-3.9	35.5-36.0
7.5 mean	0.51	3.82	28.17	3.0	0.42	4.37	28.87	0.75	0.51	3.91	35.27
SD	0.012	0.02	1.31		0.004	0.012	0.57		0.008	0.036	0.81
Range	0.5-0.53	3.8-3.85	27.5-30.0		0.46-0.47	4.35-4.37	28.1-29.5		0.5-0.52	3.87-3.96	34.0-36.0
10.0 mean	0.6	3.81	18.63	4.0	0.54	4.35	32.3	1.00	0.54	3.92	37.23
SD	0.005	0.012	1.29		0.004	0.012	0.9		0.009	0.01	0.37
Range	0.59-0.6	3.8-3.83	17.00-20.00		0.53-0.55	4.33-4.36	31.0-33		0.53-0.55	3.9-3.93	36-37.5

Note : Mean values represent the average of determinants in three independent tests

* denotes significant difference at 5% level compared to other combinations of sucrose

/ denotes significant reduction compared to their use singly at 5% level.

Ap. 9.7 Fortification of soy milk with fermentable sugars (Whey with RSM or Lactose powder and RSM with Lactose powder) on DTA, pH and Curd Strength

WHEY (10 ml) WITH RSM (ml)	DTA (% I.a)	pH	CURD STRENGTH (g)	WHEY (10 ml) WITH LACTOSE (g%)	DTA (% I.a)	pH	CURD STRENGTH (g)	RSM (4ml) WITH LACTOSE (g%)	DTA (% I.a)	pH	CURD STRENGTH (g)
1.0 mean	0.51	4.49	35.13	0.25	0.78	4.18	23.83*	0.25	0.468	4.56	30.2
•SD	0.045	0.03	1.3		0.008	0.08	1.18		0.006	0.029	0.81
Range	0.45-0.56	4.4-4.56	33.5-36.7		0.7-0.71	4.11-4.13	22.6-25.4		0.46-0.48	4.53-4.6	29.1-31.00
2.0 mean	0.46	4.43	31.13	0.5	0.62	4.1	19.2*	0.5	0.47	4.43	28.53
•SD	0.02	0.021	1.3		0.049	0.024	1.42		0.004	0.021	2
Range	0.43-0.5	4.37-4.48	29.5-32.7		-0.1	4.06-4.12	17.5-21.00		0.47-0.48	4.4-4.45	26.0-31
3.0 mean	0.47	4.38	30.27	0.75	0.77	3.98	15.07*	0.75	0.53	4.34	31.3
•SD	0.022	0.02	0.92		0.035	0.016	0.53		0.016	0.09	1.8
Range	0.45-0.5	4.36-4.41	29-31.2		0.77-0.8	3.97-4.1	13.1-16.4		0.51-0.55	4.33-4.36	29-33.4
4.0 mean	0.5	4.34	30.7	1.00	0.79	3.95	13.37*	1.0	0.56	4.28	33.23
•SD	0.041	0.01	2.25		0.16	0.066	1.14		0.026	0.057	1.88
Range	0.45-0.55	4.32-4.36	27.8-33.3		0.79-0.81	3.8-4.01	11.8-14.5		0.54-0.600	4.22-4.36	30.7-35.2

Mean values represent the average of determinants in three independent tests.

* denotes significant difference from controls (5% level)

Ap. 9.8 Effect of Bay leaf treatment on DTA, pH, curd strength and yield characteristics of soymuska prepared from soymilk containing source : lactose & whey : milk (with egg at 33.3% level).

Bay Leaf (%)	DTA (% I.a)	pH	CURD STRENGTH (g)	Yield of muska (g)	TA of muska(%I.a)
SOYMILK CONTAINING SUCROSE : LACTOSE					
0.1 mean	0.54	4.2	35.66	29.11	0.43
-SD	0.02	0.11	1.92	2.14	0.001
Range	0.52-0.56	4.13-4.34	33.5-37.2	26.6-30.6	0.41-0.45
0.2 mean	0.5	4.14	35.06	30.88	0.45
-SD	0.01	0.02	2.7	0.37	0.044
Range	0.49-0.51	4.12-4.16	32.5-37.9	30.6-31.3	0.42-0.51
0.3 mean	0.47	4.16	35.6	30.33	0.43
-SD	0.02	0.03	2.5	0.33	0.01
Range	0.45-0.5	4.15-4.17	33-38.2	30-30.6	0.43-0.44
0.4 mean	0.51	4.09	34.9	28.77	0.45
-SD	0.01	0.03	1.85	3.23	-
Range	0.5-0.52	4.08-4.09	32.8-36.3	26-32.3	0.45
SOYMILK CONTAINING WHEY : MILK					
0.1 mean	0.56	4.62	34.16	32.8	0.47
-SD	0.01	0.01	1.45	0.48	0.06
Range	0.53-0.6	4.58-4.62	32-35.2	32.4-33.3	0.4-0.51
0.2 mean	0.53	4.61	34.43	32.7	0.49
-SD	0.02	0.014	1.85	0.83	0.1
Range	0.51-0.55	4.61-4.63	32.5-36.2	32-33.6	0.38-0.56
0.3 mean	0.52	4.53	33.06	32.11	0.47
-SD	0.03	0.03	2.9	0.5	0.01
Range	0.05-0.56	4.5-4.57	30-35.8	31.6-32.6	0.44-0.5
0.4 mean	0.57	4.37	32.6	31.44	0.47
-SD	0.03	0.03	1.7	0.69	0.1
Range	0.53-0.6	4.3-4.4	30.8-34.2	30.6-32.0	0.35-0.55
Control S:L Mean	0.6	4.2	36.02	31.44	0.46
-SD	0.06	0.11	4.1	0.9	0.01
Range	0.52-0.65	4.14-4.33	34.5-36.3	30-32	0.44-0.48
Control W:M Mean	0.55	4.4	35.14	35.14	0.49
-SD	0.01	0.014	2.5	2	0.09
Range	0.53-0.60	4.38-4.1	32-38	32-37	0.39-0.55

Ap.9.9 Effect of Lemon grass treatment on DTA, pH, curd strength and yield characteristics of soymuska prepared from soymilk containing source : lactose & whey : milk (with egg at 33.3% level)

Lemon grass (%)	DTA (% I.a)	pH	CURD STRENGTH (g)	Yield of muska (g)	TA of muska(%I.a)
SOYMILK CONTAINING SUCROSE : LACTOSE :					
0.1 mean	0.57	4.06	35.16	31.9	0.5
-SD	0.02	0.02	2.52	1.2	0.003
Range	0.55-0.59	-0.04	32.6-37.3	30.5-33.0	0.48-0.52
0.2 mean	0.57	4.07	34.66	30.74	0.5
-SD	0.026	0.01	1.75	2.09	0.001
Range	0.55-0.6	4.06-0.01	33.1-34.7	28.3-31.6	0.49-0.52
0.3 mean	0.52	4.08	34.53	31	0.46
-SD	0.03	0.005	1.63	0.89	0.077
Range	0.5-0.56	4.08-4.09	33.2-36.2	30-31.6	0.40-0.55
0.4 mean	0.55	4.07	34.16	31.29	0.47
-SD	0.044	0.024	1.33	1.78	0.044
Range	0.5-0.6	4.05-4.1	33.1-35.2	30-33.3	0.42-0.51
SOYMILK CONTAINING WHEY : MILK :					
0.1 mean	0.59	4.06	34.5	31.22	0.5
-SD	0.06	0.15	4.8	1.57	0.05
Range	0.52-0.65	3.9-4.2	34.5-38.2	30-33.3	0.45-0.55
0.2 mean	0.53	4.39	36.1	31.55	0.5
-SD	0.02	0.07	4.1	0.76	0.005
Range	0.51-0.55	4.3-4.45	34.8-36.1	30-32.00	0.48-0.52
0.3 mean	0.51	4.4	34.2	31.66	0.49
-SD	0.02	0.014	1.4	0.33	0.04
Range	0.49-0.54	4.39-4.42	32.8-35.6	31.33-32.00	0.45-0.53
0.4 mean	0.49	4.42	36	30.3	0.48
-SD	0.03	0.026	8.3	0.87	0.005
Range	0.45-0.51	4.39-4.44	34.2-36.00	29.6-31.3	0.46-0.50

Ap. 9.10 Effect of Bay leaf and lemon grass treatment on sensory properties of cheese cake prepared with 33.3% egg

TREATMENT		SENSORY PROPERTIES							
		Colour & Appearance	Body & Texture	Flavour	Overall Accept.	Colour & Appearance	Body & Texture	Flavour	Overall Accept.
Sucrose:lactose		Bay leaf treated cheese cake				Lemon grass treated cheese cakes.			
0.1%	Mean	3.89	3.78	2.78	2.83	3.8	3.78	2.78	2.83
	•SD	0.67	0.72	1.1	1.03	0.67	0.72	1.1	1.03
	Range	2-5	2-5	1-5	1-5	2-5	2-5	1-5	1-5
0.2%	Mean	3.72	3.67	2.89	3.06	3.7	3.67	2.89	3.06
	•SD	0.57	0.59	0.83	0.72	0.57	0.59	0.83	0.72
	Range	2-4	2-4	1-4	2-4	2-4	2-4	1-4	2-4
0.3%	Mean	3.56	3.33	2.83	2.83	3.56	3.33	2.83	2.83
	•SD	0.78	0.76	0.85	0.78	0.78	0.76	0.85	0.78
	Range	2-4	2-4	2-4	1-4	2-4	2-4	1-4	1-4
0.4%	Mean	3.72	3.78	2.89	2.94	3.72	3.78	2.89	2.9
	•SD	0.57	0.42	1.01	0.72	0.57	0.42	1.01	0.72
	Range	2-4	3-4	1-5	1-4	2-4	3-4	1-4	1-4
WHEY:RSM									
0.1%	Mean	3.78	3.78	3.33	3.33	3.78	3.72	3.33	3.1
	•SD	0.42	0.64	0.68	0.59	0.64	0.57	0.83	0.59
	Range	3-4	3-5	2-4	2-4	2-4	3-5	2-4	2-4
0.2%	Mean	3.89	3.67	3.28	3.17	3.83	3.61	3.72	3.2
	•SD	0.31	0.68	0.66	0.7	0.5	0.69	0.57	0.56
	Range	3-4	2-4	2-4	2-4	3-5	2-4	3-5	2-4
0.3%	Mean	3.83	3.5	3.44	3.39	3.83	3.56	3.5	3.2
	•SD	0.5	0.7	0.61	0.5	0.5	0.61	0.7	0.61
	Range	2-4	2-4	2-4	3-4	3-5	2-4	3-5	2-4
0.4%	Mean	3.89	3.78	3.17	3.22	3.89	3.61	3.5	3.2
	•SD	0.31	0.8	0.7	0.64	0.46	0.69	0.78	0.69
	Range	3-4	2-5	2-4	2-4	3-5	2-5	2-5	2-4
Control(Sucrose: Lactose)									
	Mean	3.89	3.57	3.0	3.0				
	•SD	0.31	0.42	0.76	0.72				
	Range	3-4	3-4	2-4	2-4				
Whey:Milk									
	Mean	3.83	3.56	3	2.78				
	•SD	0.5	0.7	0.68	0.6				
	Range	3-5	2-5	2-4	2-4				

Note : Mean values represent the average of determinants in three independent tests (n=3x6 (judges) = 18).

Ap. 9.11 Effect of Titratable Acidity (TA) and pH of cheese cake mix with different proportion of thickening ingredients.

Proportion of egg / rice / wheat / potato (g %)												
	20	23	26	28.5	31	33	20	23	26	28.5	31	33
WITH EGG:												
Sucrose:lactose	TA of Cheese cake						pH of cheese cake					
Mean	0.73	0.72	0.73	0.73	0.72	0.72	4.66	4.69	4.76	4.78	4.81	4.82
•SD	0.026	0.0001	0.014	0.026	0.014	0.02	0.008	0.02	0.05	0.048	0.066	0.06
Range	0.70-0.75	0.72-0.73	0.71-0.74	0.71-0.76	0.7-0.73	0.71-0.74	4.65-4.67	4.69-4.71	4.76-4.80	4.78-4.81	4.81-4.85	4.82-4.85
WITH EGG :												
whey:milk												
Mean	0.75	0.77	0.7	0.75	0.74	0.74	4.6	4.63	4.56	4.64	4.66	4.72
•SD	0.022	0.022	0.041	0.03	0.056	0.01	0.062	0.11	0.23	0.15	0.06	0.028
Range	0.72-0.76	0.74-0.78	0.67-0.75	0.71-0.77	0.68-0.79	0.73-0.75	4.58-4.67	4.55-4.76	4.3-4.74	4.5-4.81	4.6-4.66	4.7-4.72
WITH RICE:												
Sucrose:lactose												
Mean	0.79	0.75	0.74	0.72	0.7	0.69	4.47	4.49	4.51	4.52	4.55	4.56
•SD	0.014	0.034	0.024	0.036	0.031	0.031	0.05	0.024	0.028	0.031	0.045	0.05
Range	0.78-0.81	0.72-0.79	0.71-0.76	0.68-0.75	0.66-0.72	0.65-0.71	4.48-4.51	4.47-4.52	4.49-4.54	4.50-4.56	4.51-4.60	4.51-4.61
WITH RICE:												
WHEY : RSM												
Mean	0.82	0.8	0.8	0.78	0.77	0.76	4.43	4.44	4.45	4.48	4.49	4.51
•SD	0.07	0.044	0.037	0.03	0.022	0.02	0.08	0.22	0.063	0.045	0.055	0.062
Range	0.76-0.9	0.76-0.85	0.77-0.84	0.75-0.81	0.76-0.80	0.74-0.78	4.3-4.5	4.4-4.52	4.4-4.52	4.45-4.53	4.43-4.54	4.44-4.56
WITH WHEAT:												
Sucrose:lactose												
Mean	0.85	0.86	0.86	0.89	0.87	0.87	4.23	4.25	4.25	4.23	4.25	4.22
•SD	0.04	0.01	0.017	0.07	0.026	0.044	0.08	0.075	0.095	0.12	0.1	0.11
Range	0.80-0.88	0.85-0.87	0.85-0.88	0.86-0.9	0.85-0.9	0.82-0.91	4.14-4.31	4.16-4.30	4.15-4.34	4.1-4.34	4.16-4.36	4.10-4.32
WITH WHEAT:												
WHEY : RSM												
Mean	0.77	0.8	0.77	0.81	0.86	0.89	4.31	4.33	4.38	4.4	4.42	4.42
•SD	0.05	-	0.022	0.046	0.119	0.01	0.04	0.026	0.02	0.02	0.014	0.014
Range	0.71-0.81	0.8	0.76-0.8	0.76-0.85	0.78-1.0	0.88-0.9	4.27-4.35	4.30-4.35	4.36-4.4	4.38-4.4	4.4-4.43	4.36-4.45
WITH POTATO												
Sucrose:lactose												
Mean	0.98	0.9	0.87	0.87	0.83	0.77	4.4	4.45	4.49	4.51	4.54	4.56
•SD	0.18	0.044	0.12	0.075	0.06	0.08	0.01	0.014	0.017	0.01	0.01	0.014
Range	0.85-1.2	0.85-0.95	0.76-1.0	0.79-0.94	0.78-0.9	0.69-0.85	4.39-4.4	4.43-4.46	4.47-4.50	4.50-4.52	4.53-4.55	4.54-4.57
WITH POTATO												
WHEY : RSM												
Mean	0.89	0.86	0.81	0.77	0.78	0.77	0.89	0.86	0.81	0.77	0.78	0.77
•SD	0.01	0.11	0.046	0.22	0.08	0.044	0.01	0.11	0.046	0.22	0.08	0.044
Range	0.88-0.9	0.78-1.0	0.76-0.85	0.76-0.8	0.75-0.8	0.71-0.79	0.88-0.9	0.78-1.0	0.76-0.85	0.76-0.8	0.75-0.8	0.71-0.81

NOTE : Mean values represent the average of determinants in three independent tests.

Ap. 9.12 Gel strength of cheese cake with different proportion of thickening agents and setting temperatures.

Temperature of setting (30 min)	GEL STRENGTH (g)					
	Proportion of thickening agent (%)					
At 60°C	20	23	26	28.5	31	33.3
WITH EGG						
Mean	57.43	57.1	46.63	46.17	45.2	43
•SD	2	2.7	1.45	2.25	0.81	0.2
Range	55.5-59.5	54-59	45-47.8	44-48.5	44.5-46.1	42.8-43.2
WITH RICE						
Mean	78.97	80.4	85.07	86.07	87.53	87
•SD	6.46	2.76	3.52	2.65	2.19	1.73
Range	74-86	78-83	81-87	83-87.6	85-88.8	85-88
WITH WHEAT						
Mean	71.77	76.97	79.07	80.9	83.03	83.2
•SD	1.76	3.27	2.25	3.13	4.03	2.45
Range	69.8-73.2	74.6-80.7	76.7-81.2	77.3-83	78.6-86.5	80.5-85.3
WITH POTATO						
Mean	68.17	73.17	78.23	81	82.4	82.83
•SD	3.01	2.75	5.51	6.08	5.57	5.92
Range	65-71	70-75	72-82.5	74-85	76-86.2	76-86.5
At 65°C						
WITH EGG						
Mean	59.32	56.77	51.77	46.83	44.4	43.9
•SD	2.96	4.21	2.44	2.36	0.54	0.89
Range	55.9-61.5	52-60.0	50.5-54.6	45-49.5	44-45	43-44.8
WITH RICE						
Mean	78.27	81.1	83.27	85.6	87.93	88.07
•SD	2.7	2.34	2.84	2.16	1.58	1.26
Range	75.2-80.3	78.7-83.4	80.5-86.2	84.2-88.1	86.1-89	87.2-89.5
WITH WHEAT						
Mean	82.73	84.47	84.47	86.57	88.6	89.67
•SD	2.38	3.49	4.7	5.82	7.4	7.38
Range	80.6-85.3	80.6-87.4	79.8-89.2	80.1-91.4	80.2-94.2	81.3-95.3
WITH POTATO						
Mean	70.83	73	75.23	80.33	81.77	82.93
•SD	2.36	1.73	4.33	1.51	5.92	8.3
Range	69-73.5	72-75	70.5-79	79-82	75-86	73-87.5

contd....

Ap. 9.12 contd....

Temperature of setting (30 min)	GEL STRENGTH (g)					
	Proportion of thickening agent (%)					
At 70°C	20	23	26	28.5	31	33.3
WITH EGG (Sucrose:lactose)						
Mean	83.23	91.33	101.1	107.9	113.7	119
•SD	3.02	3.51	7.17	2.59	1.52	1
Range	80-86	88-95	95-109	105-110	112-115	118-120
WITH EGG (whey : RSM)						
Mean	82.83	90	97.57	102.33	110.33	115.67
•SD	2.91	2.64	8.03	7.5	4.61	5
Range	79.5-85	88-93	90-106	95-110	105-113	111-121
WITH RICE						
Mean	78.43	80.73	82.43	85.8	90.6	92.27
•SD	3.37	4.69	1.69	1.58	1.58	2.21
Range	75.3-82	77-86	81-84.3	84-87	90-92.4	90.2-94.6
WITH WHEAT (Sucrose:lactose)						
Mean	92.87	95.6	97.17	98.7	98.5	98.93
•SD	5.33	5.54	7.54	6.8	9.26	5.41
Range	89.2-99	92.3-102	91-106	94-106.5	91.5-109	94.6-105
WITH WHEAT (whey : RSM)						
Mean	88.3	91.33	92.0	95	95.67	98.67
•SD	3.05	4.16	0.063	5.56	1.526	3.05
Range	85-91	88-96	4.4-4.52	90-101	94-97	96-102
WITH POTATO						
Mean	77.17	81.77	85.5	87.67	90.6	94.7
•SD	1.72	1.56	1.31	0.64	0.78	0.78
Range	75.3-78.7	80-83.2	84.3-86.9	87.2-88.4	90.1-91.5	94.2-95.6
At 75°C						
WITH EGG						
Mean	88.33	94.67	104.17	124	135.5	139
•SD	1.15	0.57	1.95	2.64	0.014	1
Range	87-89	94-95	102-106	121-126	4.4-4.43	138-140
WITH RICE (Sucrose:lactose)						
Mean	82.73	84.03	85.63	90	91.27	91.67
•SD	2.41	1.67	2.89	4.58	5	5.19
Range	80.2-85	82-85	82.4-88	85-94	85.6-95.1	86-96.2

contd...

Ap. 9.12 contd....

Temperature of setting (30 min)	GEL STRENGTH (g) Proportion thickening agent (%)					
	20	23	26	28.5	31	33.3
At 75°C						
WITH RICE (whey : RSM)						
Mean	83.33	85.63	87.67	89	90	93
•SD	2.88	3.11	2.3	2.64	3.6	2.64
Range	80-85	82-88	85-89	86-91	87-94	91-96
WITH WHEAT						
Mean	79.17	78.83	79.6	77.4	77.47	74.9
•SD	3.9	1.98	0.6	1.4	1	1.51
Range	75.2-83	77.1-81	79.2-80.3	76.4-79	76.5-78.6	73-76.2
WITH POTATO (Sucrose:lactose)						
Mean	82.83	89.3	94.6	99.2	103.37	106.4
•SD	2.84	3.31	4.65	6.29	6.6	7.9
Range	82-86	85.6-92	89.3-96.5	92.5-105	96-109	-14.7
WITH POTATO (whey : RSM)						
Mean	82	85.33	92.67	97.67	100.03	104.33
•SD	6.55	4.04	2.08	3.51	3	4.93
Range	75-88	83-90	91-95	94-101	97-103	101-110
AT 80°C						
WITH EGG						
Mean	-	-	-	-	-	-
•SD						
Range						
WITH RICE						
Mean	71.73	73.1	78.73	82.07	84.3	88.47
•SD	3.6	5.14	4.14	5.71	7.27	7.71
Range	68-75.2	68-78.3	75-83.2	77.3-88.4	79-92.6	81-96.4
WITH WHEAT						
Mean	64.32	66.25	68.58	67.93	67.1	67.52
•SD	3.51	2.21	1.79	1.15	1.55	0.76
Range	60.75-67.9	63.8-68.2	66.9-70.5	66.7-69	65.5-68.6	66.76-68.38
WITH POTATO						
Mean	75.03	81.4	84.47	89.23	93.7	94.07
•SD	1.44	1.85	2.72	2.76	2.52	2.29
Range	73.6-76.5	79.5-83.2	82.6-87.6	87.3-92.4	92-96.6	92.5-96.7

NOTE : Mean values represent the average of determinants in three independent tests.

Ap. 9.13 Effect of different Proportions of egg and setting temperature on the Sensory Properties of cheese cake

Setting Temperature	SENSORY PROPERTIES																								
	COLOUR AND APPEARANCE						BODY & TEXTURE						FLAVOUR						OVER ALL ACCEPTABILITY						
	Proportion of egg (%)						Proportion of egg (%)						Proportion of egg (%)						Proportion of egg (%)						
	20	23	26	28.5	31	33	20	23	26	28.5	31	33	20	23	26	28.5	31	33	20	23	26	28.5	31	33	
60°C																									
Mean	3.28	3.33	3.28	3.28	3.28	3.22	2.11	2.22	2.28	2.22	2.11	2.11	2.11	1.8	2	2	2	1.89	1.94	1.89	2.06	2.06	2.06	2	2.6
±SD	0.82	0.76	0.67	0.75	0.67	0.73	1.02	1	1.1	1.1	1.1	1	0.98	1.08	1.08	1	0.83	0.93	0.76	1	1	1	0.87	0.84	
Range	2-4	2-4	2-4	2-4	2-4	2-4	1-3	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-3	1-4	1-3	1-4	1-4	1-4	1-3	
65°C																									
Mean	3.11	3.11	3.28	3.17	3.22	3.06	2.56	2.61	2.56	2.44	2.5	2.3	3	3.11	3.17	3	2.94	2.5	2.56	2.83	2.89	2.83	2.73	2.83	
±SD	0.76	0.76	0.75	0.78	0.73	0.8	0.92	0.97	0.98	0.78	0.98	0.9	0.68	0.76	0.78	1.02	0.93	0.92	0.92	0.38	0.46	0.5	0.73	0.7	
Range	2-4	2-4	2-4	2-4	2-4	2-4	1-4	1-4	1-4	1-4	1-4	1-4	2-4	2-4	2-4	1-4	1-4	1-4	1-3	2-3	2-3	2-3	1-4	1-4	
70°C																									
Buc. illarose																									
Mean	4	3.94	4	3.94	4	3.94	3.83	3.67	3.5	3.78	3.44	3.67	3.83	3.5	3.44	3.67	3.33	3.72	3.67	3.28	3.17	3.17	3.22	3.28	
±SD	0.48	0.41	0.48	0.44	0.48	0.24	0.38	0.76	0.61	0.64	0.5	0.59	0.86	0.98	0.7	0.84	0.76	0.75	0.68	0.75	0.61	0.5	0.64	0.57	
Range	3-5	3-5	3-5	3-4	3-5	3-4	3-4	3-5	3-5	3-5	3-4	3-4	3-4	2-5	2-5	2-5	2-5	2-5	2-4	2-5	2-4	2-4	2-4	2-4	
70°C																									
Whey : RCM																									
Mean	3.78	3.78	3.89	3.94	3.89	3.89	3.56	3.72	3.5	3.72	3.28	3.28	3.5	3.5	3.56	3.44	3.22	3.83	3.39	3.39	3.39	3.06	2.72	2.37	
±SD	0.42	0.42	0.42	0.41	0.31	0.31	0.7	0.45	0.61	0.67	0.67	0.67	0.68	0.78	0.7	0.94	0.78	0.78	0.7	0.5	0.5	0.72	0.67	0.67	
Range	3-4	3-4	3-4	4-5	3-4	3-4	2-4	3-4	3-4	1-5	2-4	2-4	2-4	2-5	2-4	1-5	1-4	1-4	2-4	3-4	3-4	3-4	1-4	1-4	
75°C																									
Mean	3.4	3.5	3.5	3.56	3.56	3.44	3	3.11	3.06	3	3.11	3.06	2.83	2.89	3	2.83	3	2.89	2.83	2.94	2	2.94	3	2.9	
±SD	0.7	0.7	0.78	0.7	0.7	0.85	0.84	0.76	0.8	0.8	0.76	0.87	0.7	0.46	0.48	0.61	0.59	0.67	0.61	0.41	0.59	0.53	0.47	0.67	
Range	2-4	2-4	2-4	2-4	2-4	2-4	1-4	1-4	1-4	1-4	1-4	1-4	1-3	2-4	2-4	2-4	2-4	2-4	1-4	2-4	2-4	2-4	2-4	2-4	
80°C																									
Mean	3.61	3.61	3.67	3.67	3.78	3.67	3.11	3.11	3.11	3.17	3	3	3.11	3.17	3.06	3.17	3.22	3.28	2.78	3.06	2.83	3.06	2.9	3	
±SD	0.5	0.5	0.48	0.48	0.64	0.59	0.67	0.67	1.02	0.92	0.68	0.89	0.9	0.78	1.1	0.92	0.94	0.89	0.64	0.72	0.98	0.87	0.8	0.76	
Range	3-4	3-4	3-4	3-4	3-4	2-4	2-4	2-4	1-5	2-5	2-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	2-4	1-4	1-4	

Ap. 9.14 Analysis of Variance for sensory qualities of cheese cake Prepared with different Proportion of egg and setting temperature.

Setting Temperature °C for 30min	SENSORY PROPERTIES																							
	COLOUR AND APPEARANCE						BODY & TEXTURE						FLAVOUR											
	Proportion of egg (g%)			Proportion of egg (g%)			Proportion of egg (g%)			Proportion of egg (g%)			Proportion of egg (g%)			OVER ALL ACCEPTABILITY								
20	23	26	28.5	31	33	20	23	26	28.5	31	33	20	23	26	28.5	31	33	20	23	26	28.5	31	33	
60 vs 65	0.17	0.22	0	0.11	0.06	0.17	-0.44	0.39	-0.28	-0.22	-0.39	-0.22	-1.07	-1.1	-1.17	-0.94	-1.06	-0.56	-0.57	-0.78	-0.83	-0.78	-0.78	-0.78
60 vs 70	-0.72	-0.61	-0.72	-0.67	-0.67	-0.72	-1.72	-1.44	-1.22	-1.56	-1.33	-1.56	-2.0	-1.5	-1.44	-1.61	-1.4	-1.78	-1.78	-1.22	-1.11	-1.11	-1.22	-1.22
60 vs 75	-0.17	-0.17	-0.22	-0.28	-0.28	-0.22	-0.89	-0.89	-0.78	-0.83	-1.00	-0.94	-1.0	-0.89	-1.00	-0.78	-1.1	-0.94	-0.94	-0.89	-0.94	-0.89	-1.06	-0.86
60 vs 80	-0.33	-0.28	-0.39	0.39	-0.50	-0.44	-1.00	-0.89	-0.83	-0.94	-0.89	-0.94	-1.28	-1.17	-1.06	-1.11	-1.3	-1.33	-0.89	-1.0	-0.78	-1.0	-0.94	-0.94
65 vs 70	-0.89	-0.83	-0.72	-0.78	-0.78	-0.89	-1.28	-1.06	-0.94	-1.33	-0.94	-1.33	-0.83	-0.39	-0.28	-0.67	-0.39	-1.22	-1.11	-0.4	-0.28	-0.33	-0.44	-0.44
65 vs 75	-0.33	-0.39	-0.22	-0.39	-0.33	-0.39	-0.44	-0.5	-0.5	-0.61	-0.61	-0.72	0.17	0.17	0.22	0.17	0.17	-0.06	-0.39	-0.28	-0.1	-0.11	-0.11	-0.28
65 vs 80	-0.33	-0.39	-0.39	-0.5	-0.56	-0.61	-0.56	-0.5	-0.56	-0.72	-0.5	-0.72	-0.11	-0.06	0.11	-0.17	-0.28	-0.78	-0.22	0.2	0.06	0.22	-0.17	-0.17
70 vs 75	0.56	0.44	0.5	0.39	0.44	0.5	0.83	0.56	0.44	0.72	0.33	0.61	1	0.61	0.44	0.83	0.33	0.83	0.83	0.33	0.17	0.22	0.17	0.39
70 vs 80	0.389	0.33	0.33	0.278	0.22	0.27	0.722	0.55	0.389	0.61	0.44	0.61	0.722	0.33	0.39	0.05	0.11	0.44	0.88	0.22	0.33	0.11	0.27	0.27
75 vs 80	-0.167	-0.111	-0.16	-0.11	-0.22	-0.2	-0.11	0	-0.056	-0.11	0.11	0	-0.27	-0.27	-0.05	-0.03	0.2	-0.38	0.05	-0.11	0.16	-0.11	0.11	-0.11

* Critical Difference Value : 0.86

Ap. 9.15 Effect of different Proportions of rice and setting temperature on the Sensory Properties of cheese cake

SENSORY PROPERTIES																									
Setting	COLOUR AND APPEARANCE						BODY & TEXTURE						FLAVOUR						OVER ALL ACCEPTABILITY						
	Proportion of rice (g%)						Proportion of rice (g%)						Proportion of rice (g%)						Proportion of rice (g%)						
	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3	
60°C																									
Mean	3.5	3.28	3.39	3.11	3.33	3.33	3.11	2.94	2.94	2.94	2.89	3	3.56	3.61	3.44	3.5	3.5	3.4	3.33	3.22	3.17	3	3.17	3	
+SD	1.04	0.89	0.77	0.9	0.96	0.84	0.83	1	0.93	0.83	1	0.78	0.6	0.7	0.86	0.78	0.78	0.78	0.48	0.42	0.5	0.53	0.5	0.41	
Range	2-4	2-4	2-4	2-4	2-5	2-4	2-4	2-4	1-4	1-4	1-4	1-5	2-4	2-4	2-4	2-4	2-5	2-5	3-4	3-4	2-4	2-4	2-4	2-4	
65°C																									
Mean	2.94	3.06	3	3.06	3.06	3	3	2.78	2.67	2.67	2.72	3.11	3	3.06	3.06	2.94	2.94	3.8	3	2.83	3	2.9	2.78	2.8	
+SD	0.93	0.87	0.9	0.87	0.87	0.87	0.8	0.87	0.96	0.96	0.89	1	1	0.93	0.93	0.93	0.93	0.76	0.87	0.78	0.84	0.8	0.87	0.78	
Range	1-4	2-5	2-4	2-4	2-5	2-5	2-5	2-5	2-5	2-5	2-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	1-4	
70°C																									
Mean	4	3.94	4	3.94	3.56	3.61	4	3.78	3.78	3.56	3.56	3.5	3.39	3.33	3.28	3.22	3.17	3.22	3.94	3.72	3.78	3.5	3.5	5.5	
+SD	3.34	0.41	0.48	0.53	0.92	0.7	0.68	0.7	0.7	0.92	0.92	0.5	0.5	0.48	0.45	0.64	0.61	0.54	0.41	0.57	0.73	0.92	0.92	0.92	
Range	3-5	3-5	3-5	2-5	2-5	3-5	3-5	3-5	3-5	2-5	2-5	3-4	3-4	3-4	3-4	2-4	2-4	2-4	3-5	3-5	3-5	2-5	2-5	2-5	
75°C																									
suc. lactose																									
Mean	3.94	3.94	3.72	3.61	3.78	3.94	3.94	3.67	3.67	3.61	3.72	3.78	3.94	3.67	3.78	3.67	3.78	4	3.89	3.67	3.67	3.5	3.72	3.72	
+SD	0.46	0.29	0.42	0.45	0.45	0.58	0.41	0.57	0.59	0.7	0.7	0.78	0.29	0.7	0.77	0.61	0.78	0.7	0.22	0.59	0.5	0.5	0.61	0.6	
Range	3-5	3-5	3-5	2-5	3-5	3-5	3-5	3-5	3-4	3-5	2-5	3-5	3-5	3-5	3-5	3-5	1-4	2-5	2-5	3-5	3-5	3-5	3-5	3-5	
75°C whey																									
Mean	3.89	3.78	3.78	3.72	3.72	3.89	4	3.72	3.67	3.5	3.61	3.56	3.67	3.44	3.39	3.44	3.56	3.35	3.83	3.61	3.5	3.56	3.56	3.61	
+SD	0.46	0.42	0.42	0.45	0.45	0.58	0.48	0.57	0.59	0.7	0.7	0.78	0.68	0.7	0.77	0.61	0.78	0.7	0.7	0.7	0.5	0.5	0.61	0.6	
Range	3-5	3-4	3-4	3-4	3-4	3-4	3-5	3-5	3-5	2-4	2-5	3-4	2-5	2-4	2-4	3-4	3-5	2-5	2-5	2-5	3-4	3-4	2-4	3-4	
80°C																									
Mean	3.39	3.5	3.44	3.44	3.33	3.28	3.61	3.56	3.22	3.22	3.33	3.22	3.56	3.39	3.11	3.33	3.5	3.56	3.39	3.22	3.11	3.11	3.22	3.11	
+SD	0.7	0.7	0.78	0.7	0.76	0.75	0.84	0.85	0.73	0.64	0.9	0.64	0.7	0.6	0.83	0.76	0.86	0.85	0.6	0.6	0.83	0.58	0.73	0.26	
Range	2-4	2-4	2-4	2-4	2-4	2-4	2-5	2-5	2-4	2-4	2-5	2-4	2-5	2-4	2-4	2-4	2-4	2-5	2-4	2-4	2-5	2-4	2-4	1-4	

Note:- Mean values represent the average of determinants in three independent tests. ($n=3 \times 6$ (judges) = 18)

Ap. 9.16 Analysis of Variance for sensory qualities of cheese cake with different Proportions of rice and setting temperature.

Setting Temperature (for 30 min) (°C)		SENSORY PROPERTIES																							
		COLOUR AND APPEARANCE						BODY & TEXTURE						FLAVOUR						OVER ALL ACCEPTABILITY					
		Proportion of rice (g%)			Proportion of rice(g%)			Proportion of rice(g%)			Proportion of rice (g%)			Proportion of rice (g%)			Proportion of rice (g%)			Proportion of rice (g%)					
20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3		
60 vs 65	0.56	0.22	0.39	0.06	0.28	0.28	0.06	0.17	0.28	0.28	0.17	0.28	0.44	0.56	0.39	0.44	0.56	-0.44	0.28	0.39	0.17	0.11	0.39	0.22	
60 vs 70	-0.5	-0.67	-0.61	-0.83	0.22	-0.28	-0.89	-0.83	-0.83	-0.61	-0.67	-0.5	0.17	0.28	0.17	0.28	0.33	0.22	-0.61	-0.56	-0.61	-0.5	-0.39	-0.44	
60 vs 75	-0.44	-0.61	-0.33	-0.5	0.44	-0.61	-0.83	-0.72	-0.67	-0.67	-0.83	-0.78	-0.39	-0.06	-0.33	-0.17	-0.28	-0.56	-0.56	-0.39	-0.5	-0.4	-0.56	-0.67	
60 vs 80	0.11	-0.22	-0.06	-0.3	0	0.06	-0.5	-0.61	-0.28	-0.28	-0.44	-0.22	0	0.22	-0.33	0.17	0	-0.11	-0.06	0	-0.06	-0.06	-0.06	-0.06	
65 vs 70	-1.06	-0.89	-1	-0.89	-0.5	-0.056	-0.94	-1	-1.11	-0.89	-0.83	-0.78	-0.28	-0.28	-0.22	-0.17	-0.22	-0.22	-0.89	-0.89	-0.70	-0.61	-0.78	-0.67	
65 vs 75	-1	-0.83	-0.72	-0.56	-0.72	-0.089	-0.89	-0.89	-1	-0.94	-1	-1.06	-0.83	-0.61	0.72	-0.61	-0.83	-1	-0.83	-0.83	-0.67	-0.56	-0.94	-0.89	
65 vs 80	-0.44	-0.44	-0.44	-0.39	-0.28	-0.22	-0.56	-0.78	-0.56	-0.56	-0.61	-0.5	-0.44	-0.33	0.06	-0.28	-0.56	-0.56	-0.33	-0.39	-0.11	-0.17	-0.44	-0.28	
70 vs 75	0.06	0.06	0.28	0.33	-0.22	0.33	0.17	0.11	0.11	-0.06	-0.17	-0.28	-0.56	-0.33	-0.5	-0.44	-0.61	-0.78	0.06	0.06	0.11	0.06	-0.17	-0.22	
70 vs 80	0.611	0.44	0.55	0.5	0.22	0.33	0.38	-0.22	0.55	0.33	0.22	0.27	-0.16	-0.056	0.16	-0.11	-0.33	-0.33	0.55	0.55	0.66	0.44	0.33	0.38	
75 vs 80	0.55	0.39	0.27	0.16	0.44	0.66	0.22	0.11	0.44	0.38	0.38	0.55	0.38	0.27	0.66	0.33	-0.27	0.44	0.05	0.044	0.55	0.38	0.5	0.61	

Ap. 9.17 Effect of different Proportions of wheat and setting temperature on the
Sensory Properties of cheese cake

Setting	SENSORY PROPERTIES																															
	COLOUR AND APPEARANCE								BODY & TEXTURE								FLAVOUR								OVER ALL ACCEPTABILITY							
	Proportion of wheat (g %)								Proportion of wheat (g%)								Proportion of wheat (g%)								Proportion of wheat (g%)							
Temperature (for 30 min):	20	23	26	28.5	31	33.3	31	33.3	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3	20	23	26	28.5	31	33.3						
60°C																																
Mean	3.5	3.39	3.33	3.33	3.5	3.44	3.28	3.3	3.3	2.72	2.83	2.94	2.83	3.06	2.56	2.89	2.78	2.78	2.78	2.72	2.83	2.25	2.24	2.61	2.24	2.5						
+SD	0.78	0.84	0.84	8.84	0.78	0.85	0.75	0.96	0.67	0.98	0.96	0.87	0.7	0.87	1.09	0.96	1	0.87	0.89	0.78	1.14	0.78	0.84	0.78	0.92							
Range	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-4	2-5	1-4	1-4	2-4	2-5	1-4	1-4	1-4	1-4	1-4	2-4	1-4	1-4	1-4	1-4	1-4							
65°C																																
Mean	3.67	3.5	3.67	3.56	3.61	3.67	3.2	2.94	3.2	3.06	3.06	3.06	3.06	3.22	3.17	3.22	3.06	3.22	3.11	3	2.83	3.06	3.11	3.17	3.17							
+SD	0.49	0.5	0.49	0.5	0.5	0.49	0.54	0.8	0.54	0.53	0.41	0.41	0.41	0.64	0.7	0.73	0.64	0.73	0.67	0.59	0.78	0.69	0.83	0.7	0.1							
Range	3-4	3-4	3-4	3-4	3-4	3-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	1-4	2-4	1-4							
70°C																																
(su:lactose)																																
Mean	4.11	4.11	4.11	4.11	4.11	4	3.94	3.94	3.94	3.89	3.89	3.61	3.83	3.56	3.72	3.61	3.56	3.56	3.67	3.94	3.83	3.78	3.72	3.61	3.72							
+SD	0.31	0.31	0.3	0.31	0.3	-	0.24	0.53	0.53	0.46	0.5	0.5	0.5	0.78	0.57	0.7	0.7	0.7	0.59	0.41	0.5	0.42	0.45	0.5	0.45							
Range	4-5	4-5	4-5	4-5	4-5	4-0	3-4	3-5	3-5	3-5	3-5	3-4	3-5	2-5	3-4	2-4	2-5	2-5	3-5	3-5	3-5	3-4	3-4	3-4	3-4							
70°C																																
(whey:RSH)																																
Mean	3.67	3.67	3.59	3.56	3.61	3.44	3.89	3.83	3.78	3.72	3.72	3.61	3.56	3.67	3.72	3.44	3.61	3.61	3.56	3.72	3.61	3.44	3.67	3.5	3.5							
+SD	0.84	0.68	0.98	0.78	0.6	0.78	0.31	0.78	0.73	0.95	0.95	0.91	0.5	0.84	0.57	0.7	0.84	0.6	0.61	0.95	0.7	0.7	0.48	0.5	0.5							
Range	2-5	2-5	2-5	2-5	2-5	3-5	3-4	2-5	3-5	2-5	2-5	2-5	3-4	2-5	3-5	2-5	3-5	3-5	3-5	2-5	2-5	2-4	3-4	3-4	3-4							
75°C																																
Mean	3.39	3.22	3.39	3.22	3.28	3.5	3.56	3.39	3.5	3.28	3.5	3.28	3.39	3.56	3.28	3.22	3.11	3.06	3.22	3.67	3.22	3.17	3	3	3.11							
+SD	0.84	0.73	0.77	0.8	0.95	0.78	0.7	0.7	0.5	0.67	0.67	0.67	0.6	0.7	0.89	0.73	0.67	0.72	0.8	0.59	0.8	0.78	0.72	0.76	0.8							
Range	2-5	2-4	2-4	2-4	2-5	2-5	3-5	2-4	3-4	3-4	2-4	2-4	3-4	2-5	2-4	2-4	2-4	2-4	2-5	2-5	2-4	2-4	2-4	2-4	2-5							
80°C																																
Mean	3.5	3.5	3.56	3.44	3.4	3.4	2.72	2.67	2.78	2.61	2.61	2.61	2.61	2.61	2.61	2.83	2.72	2.72	2.72	2.56	2.5	2.78	2.83	2.83	2.83							
+SD	0.7	0.78	0.78	0.7	0.78	0.78	0.67	0.59	0.64	0.7	0.6	0.6	0.6	0.9	0.77	0.61	0.67	0.67	0.67	0.85	0.75	0.62	0.61	0.6	0.6							
Range	2-4	2-4	2-5	2-4	2-4	2-5	1-3	1-3	1-4	1-4	1-4	1-3	1-3	1-4	1-3	1-4	1-4	1-4	1-3	1-3	1-3	1-3	1-3	1-3	1-3							

NOTE : Mean values represent the average of determinants in three independent tests. (n = 3x6 (judges) = 18).

Ap. 9.19 Effect of different Proportions of potato and setting temperature on the Sensory Properties of cheese cake

Setting	SENSORY PROPERTIES																	
	COLOUR AND APPEARANCE						BODY & TEXTURE						FLAVOUR					
	Proportion of potato (%)						Proportion of potato (%)						Proportion of potato (%)					
Temperature (for 30 min)	20	23	26	28.5	31	33	20	23	26	28.5	31	33	20	23	26	28.5	31	33
60°C																		
Mean	3.5	3.56	3.56	3.5	3.5	3.5	3.7	3.72	3.78	3.67	3.72	3.67	3.61	3.67	3.72	3.56	3.67	3.72
+SD	0.7	0.78	0.78	0.7	0.7	0.7	0.5	0.57	0.54	0.58	0.45	0.45	0.5	0.59	0.57	0.61	0.59	0.75
Range	2-4	2-4	2-5	2-4	2-4	2-4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	3-5	3-5	3-5	3-5	3-5
65°C																		
Mean	4	3.83	3.94	3.78	3.83	3.78	3.72	3.39	3.44	3.39	3.5	3.39	3.67	3.5	3.39	3.33	3.44	3.22
+SD	0.38	0.24	0.42	0.38	0.39	0.39	0.57	0.6	0.61	0.6	0.61	0.7	0.59	0.59	0.5	0.5	0.7	0.54
Range	4-0	3-4	3-4	3-4	3-4	3-4	2-4	2-4	2-4	2-4	2-4	2-4	3-4	2-4	3-4	3-4	3-4	2-4
70°C																		
Mean	38.3	3.83	3.83	3.72	3.72	3.72	3.94	3.94	3.94	3.89	3.61	3.83	3.44	3.5	3.44	3.39	3.33	3.33
+SD	0.38	0.38	0.38	0.45	0.45	0.58	0.2	0.53	0.53	0.46	0.51	0.51	0.78	0.51	0.7	0.6	0.6	0.6
Range	3-4	6	3-4	3-4	3-4	3-4	3-5	3-5	3-4	3-4	3-4	3-5	2-4	3-4	2-4	2-4	2-4	3-4
75°C																		
(suc:lactose)																		
Mean	3.83	3.83	3.78	3.72	4	3.94	4	3.78	3.78	3.61	3.9	3.72	3.5	3.44	3.5	3.4	3.61	3.89
+SD	0.5	0.61	0.61	0.67	0.34	0.41	0.48	0.64	0.54	0.6	0.46	0.57	0.11	0.61	0.51	0.51	0.5	0.51
Range	3-5	2-5	3-5	2-5	3-4	3-5	3-4	2-4	3-4	2-4	3-5	3-5	3-4	3-4	3-4	3-4	2-4	3-4
75°C																		
(whey:RSH)																		
Mean	4	4.06	0.83	4	3.78	3.83	4	3.83	3.83	3.72	3.67	3.61	3.72	3.72	3.61	3.56	3.67	3.67
+SD	0.24	0.38	0.38	0.42	0.38	0.38	0.59	0.71	0.78	0.78	0.76	0.77	0.67	0.67	0.6	0.7	0.68	0.48
Range	4.0	4.5	3-4	4	3-4	3-4	2-5	2-5	2-5	2-5	2-5	2-5	2-4	2-5	2-4	2-4	2-5	3-4
80°C																		
Mean	3.67	3.67	3.67	3.61	3.67	3.61	3.22	3.33	3.44	3.11	3.28	3.11	3	3.11	3.11	3	3.11	3.06
+SD	0.48	0.48	0.48	0.6	0.48	0.6	0.73	0.9	0.78	0.75	0.57	0.75	0.76	0.26	0.58	0.76	0.67	0.8
Range	3-4	3-4	3-4	3-4	3-4	3-4	2-4	2-4	3-5	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4

NOTE : Mean values represent the average of determinants in three independant tests (n = 3x6 (judges) = 18).

Ap. 9.20 Analysis of Variance for sensory qualities of cheese cake with different Proportions of Potato and setting temperature.

		SENSORY PROPERTIES																	
Setting Temperature (for 30 min) (°C)		COLOUR AND APPEARANCE						BODY & TEXTURE						FLAVOUR					
		Proportion of potato (%)						Proportion of potato (%)						Proportion of potato (%)					
		20	23	26	28.5	31	33	20	23	26	28.5	31	33	20	23	26	28.5	31	33
60 vs 65		-0.5	-0.28	-0.39	-0.28	-0.33	-0.28	0	0.33	0.33	0.28	0.22	0.28	-0.06	0.17	0.33	0.33	0.11	0.28
60 vs 70		-0.33	-0.28	-0.28	-0.22	-0.22	-0.39	-0.22	0.22	-0.17	-0.22	0.11	-0.17	0.17	0.17	0.28	0.28	0.17	0.33
60 vs 75		-0.3	-0.28	-0.22	-0.22	-0.5	-0.44	-0.28	-0.06	0	0.06	-0.17	-0.06	0.11	0.22	0.22	0.22	-0.17	0.11
60 vs 80		-0.11	-0.11	-0.11	-0.11	0.17	0.11	-0.5	0.39	0.33	0.56	0.44	0.56	0.61	0.56	0.61	0.67	0.39	0.61
65 vs 70		0.17	0	0.11	0.06	0.11	-0.11	-0.22	0.56	0.5	-0.5	0.11	-0.44	0.22	0	-0.06	-0.06	0.06	0.06
65 vs 75		0.17	0	0.17	0.06	-0.17	-0.17	-0.28	0.39	-0.3	0.2	-0.39	-0.33	0.17	0.06	-0.11	-0.11	-0.28	-0.17
65 vs 80		0.33	0.17	0.28	0.17	0.17	0.17	0.5	0.06	0	0.2	0.22	0.28	0.67	0.39	0.28	0.33	-0.28	0.33
70 vs 75		0	0	0.06	0	-0.28	-0.06	-0.06	0.17	0.17	0.28	0.28	0.11	-0.06	0.06	-0.06	-0.06	0.33	-0.22
70 vs 80		0.16	0.16	0.167	0.11	0.05	0.27	0.72	0.61	0.5	0.77	0.33	0.72	0.44	0.38	0.33	0.39	0.22	0.28
75 vs 80		0.16	0.16	0.11	0.11	0.33	0.33	0.77	0.44	0.33	0.5	0.61	0.61	0.5	0.33	0.38	0.44	0.55	0.5

* Critical Difference Value for colour and Appearance and Body texture - 0.66
for flavour and overall acceptability - 0.99

Ap. 9.21 Effect of different flavouring and colouring agents on the sensory Properties of egg, rice, wheat, and potato based cheese cakes.

FLAVOURS	SENSORY PROPERTIES															
	COLOUR AND APPERANCE				BODY & TEXTURE				FLAVOUR				OVERALL ACCEPTABILITY			
	Thickening agents used (at 20 % level)															
	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato
Vanilla																
Mean	3.72	3.56	3.83	3.72	3.5	4.11	4.22	4.08	3.5	3.39	4	3.83	3.5	3.5	3.83	3.94
•SD	0.74	0.6	0.61	0.74	0.98	0.57	0.64	0.63	0.98	0.77	0.83	0.78	0.85	0.85	0.78	0.72
Range	2-5	3-5	3-5	3-5	2-5	4-5	3-5	3-5	2-5	2-5	3-5	3-5	2-5	2-5	3-5	3-5
Bayleaf																
Mean	3.83	3.61	3.78	3.89	4.11	4.11	4.17	4.17	4.22	4.39	4.44	4.33	4.06	4.28	4.33	4.39
•SD	0.38	0.5	0.42	0.47	0.32	0.31	0.37	0.37	0.64	0.69	0.61	0.59	0.53	0.74	0.59	0.69
Range	3-4	3-4	3-4	3-5	4-5	4-5	4-5	4-5	4-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5
Cardamon																
Mean	3.94	3.67	3.67	3.83	3.83	3.94	3.83	4	4.67	4.56	4.72	4.78	4.61	4.5	4.61	4.72
•SD	0.72	0.68	0.68	0.7	0.7	0.8	0.78	0.76	0.59	0.6	0.57	0.54	0.6	0.51	0.6	0.57
Range	3-5	3-5	3-5	3-5	3-5	2-5	3-5	4-5	3-5	3-5	3-5	3-5	3-5	4-5	3-5	3-5
Bay leaf + Cardamon																
Mean	4.11	3.72	3.94	4.17	4.22	4.17	4.22	4.33	4.33	4.44	4.44	4.61	4.5	4.5	4.44	4.61
•SD	0.57	0.66	0.63	0.37	0.42	0.38	0.42	0.47	0.48	0.51	0.51	0.5	0.51	0.51	0.51	0.5
Range	4-5	3-5	3-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5
Lemongrass																
Mean	4.06	3.83	4.06	4.06	3.89	3.83	3.89	4	3.89	3.67	3.89	3.78	3.89	3.83	3.89	3.89
•SD	0.41	0.37	0.41	0.41	0.47	0.5	0.46	0.47	0.57	0.68	0.67	0.54	0.46	0.61	0.46	0.47
Range	3-5	3-4	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5
Lemon																
Mean	3.94	3.83	3.89	3.83	4.17	4.17	4.22	4.22	4.22	3.94	4.06	4.17	4.06	3.72	3.94	4
•SD	0.53	0.5	0.58	0.5	0.7	0.38	0.64	0.42	0.8	0.87	0.87	0.78	0.63	0.66	0.63	0.68
Range	3-5	3-5	3-5	3-5	3-5	4-5	3-5	3-5	3-5	2-5	3-5	3-5	3-5	2-5	3-5	3-5

COhd

Ap. 9.21 contd.....

Flavours	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato
Lenongrass + Lemon																
Mean	4	3.83	3.89	4	4	3.78	4.06	4	3.94	3.78	3.89	3.89	3.83	3.78	3.89	4
•SD	0.47	0.51	0.31	0.47	0.68	0.73	0.53	0.59	0.8	0.73	0.67	0.67	0.7	0.54	0.57	0.47
Range	3-5	3-4	3-4	3-5	3-5	3-5	3-5	4-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5
Mango																
Mean	4.67	4.67	4.67	4.72	4.33	4.28	4.28	4.28	4.39	4.22	4.22	4.39	4.39	4.22	4.28	4.39
•SD	0.47	0.47	0.47	0.45	0.47	0.57	0.57	0.57	0.6	0.64	0.64	0.6	0.5	0.64	0.57	0.6
Range	4-5	4-5	4-5	4-5	4-5	3-5	3-5	3-5	4-5	3-5	3-5	3-5	4-5	3-5	3-5	3-5
Mango + Lenongrass																
Mean	4.72	4.56	4.72	4.56	4.39	4.33	4.44	4.28	4.28	4.28	4.39	4.22	4.28	4.28	4.5	4.22
•SD	0.45	0.5	0.45	0.51	0.5	0.47	0.6	0.57	0.66	0.57	0.6	0.54	0.66	0.57	0.61	0.54
Range	4-5	4-5	4-5	4-5	3-5	3-5	3-5	4-5	3-5	4-5	3-5	4-5	3-45	4-5	3-5	4-5
Orange																
Mean	4.56	4.56	4.56	4.56	4.78	4.61	4.56	4.83	4.89	4.78	4.56	4.83	4.89	4.72	4.56	4.83
•SD	0.5	0.5	0.51	0.5	0.42	0.5	0.51	0.38	0.31	0.42	0.51	0.37	0.31	0.45	0.51	0.37
Range	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5
Orange + Lenongrass																
Mean	4.56	4.17	4.33	4.33	4.33	4.17	4.44	4.33	4.39	4.17	4.39	4.28	4.33	4.17	4.44	4.28
•SD	0.51	0.7	0.59	0.57	0.59	0.61	0.51	0.47	0.84	0.78	0.77	0.74	0.84	0.78	0.7	0.74
Range	4-5	3-5	3-5	4-5	4-5	3-5	3-5	4-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5
Pineapple																
Mean	4.61	4.39	4.44	4.5	4.44	4.56	4.44	4.4	4.61	4.78	4.67	4.72	4.61	4.67	4.56	4.67
•SD	0.5	0.6	0.6	0.61	0.6	0.5	0.5	0.5	0.6	0.92	0.68	0.45	0.5	0.47	0.7	0.47
Range	4-5	4-5	3-5	4-5	4-5	4-5	4-5	4-5	3-5	4-5	3-5	4-5	4-5	4-5	3-5	4-5
Pineapple + Lenongrass																
Mean	4.56	4.39	4.5	4.39	4.44	4.5	4.61	4.5	4.56	4.33	4.39	4.5	4.67	4.39	4.5	4.61
•SD	0.5	0.69	0.61	0.6	0.61	0.5	0.5	0.61	0.7	0.68	0.6	0.61	0.48	0.6	0.51	0.5
Range	4-5	3-5	3-5	3-5	4-5	4-5	4-5	3-5	3-5	3-5	3-5	3-5	4-5	3-5	4-5	4-5

NOTE : Mean values represent the average of determinants in three independent tests (n= 3x6 (judges) = 18).

Ap. 9.22 Analysis of variance for sensory properties of chees cakes prepared with different flavouring and colouring agents

Control Cheescake vs	SENSORY PROPERTIES															
	COLOUR AND APPERANCE				BODY & TEXTURE				FLAVOUR				OVERALL ACCEPTABILITY			
	Thickening agents used (at 20 % level)															
	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato
Vanilla	0.28	0.39	0.17	0.11	0	-0.28	-0.39	-0.06	0.33	0.44	-0.17	-0.17	0.11	0.33	-0.17	-0.44
Bayleaf	0.17	0.33	0.22	-0.06	-0.28	-0.28	-0.33	-0.17	-0.39	-0.56	-0.61	-0.67	-0.39	-0.44	-0.67	-0.89
Cardamon	0.06	0.28	0.33	0	0	-0.11	0	0	-0.83	-0.72	-0.89	-0.11	-0.94	-0.67	-0.94	-1.22
Bay leaf + Cardamon	-0.11	0.22	0.06	-0.33	-0.39	-0.33	-0.39	-0.33	-0.5	-0.61	-0.61	-0.94	-0.83	0.67	-0.78	-1.11
Lemongrass (LG)	-0.06	0.11	-0.06	-0.22	-0.06	0	-0.06	0	-0.06	0.17	-0.06	-0.11	-0.22	0	-0.22	-0.39
Lemon	0.06	0.11	0.11	0	-0.33	-0.33	-0.39	-0.22	-0.39	-0.11	-0.22	-0.5	-0.39	0.11	-0.28	-0.5
Lemon + LG	0	0.11	0.11	-0.17	-0.17	0.06	-0.22	0	-0.11	-0.06	-0.06	-0.2	-0.17	0.06	-0.22	-0.5
Mango	-0.67	-0.72	-0.67	-0.89	-0.5	-0.44	-0.44	-0.28	-0.56	-0.39	-0.39	-0.72	-0.72	-0.39	-0.61	-0.89
Mango + LG	-0.72	-0.61	-0.72	-0.72	-0.56	-0.05	-0.61	-0.28	-0.44	-0.44	-0.56	-0.56	-0.61	-0.44	-0.83	-0.72
Orange	-0.56	-0.61	-0.56	-0.72	-0.94	-0.78	-0.72	-0.83	-1.06	-0.94	-0.72	-1.1	-1.22	-0.89	-0.89	-1.33
Orange + LG	-0.56	-0.22	-0.33	-0.5	-0.5	-0.33	-0.61	-0.33	-0.56	-0.33	-0.56	-0.61	-0.67	-0.33	-0.78	-0.78
Pineapple	-0.61	-0.44	-0.44	-0.67	-0.61	-0.72	-0.61	-0.44	-0.78	-0.94	-0.83	-1.06	-0.94	-0.83	-0.89	-1.17
Pineapple + LG	-0.55	-0.4	-0.5	-0.55	-0.61	-0.66	-0.77	-0.5	-0.72	-0.5	-0.55	-0.83	-1	-0.55	-0.83	-1.11

Critical difference value - 0.66

Ap. 9.23 Sensory characteristics of orange flavoured cheese cakes store at 0-4°C for 90 days.

Storage (days)		SENSORY CHARACTERISTICS															
		COLOUR AND APPERANCE				BODY & TEXTURE				FLAVOUR				OVERALL ACCEPTABILITY			
		Thickening Agent used															
egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato	egg	rice	wheat	potato		
0 day	Mean	4.67	4.53	4.33	4.47	4.53	4.53	4.4	4.27	4.2	4.47	4.33	4.27	4.27	4.4	4.33	4.13
	SD	0.48	0.51	0.61	0.63	0.51	0.51	0.63	0.59	0.55	0.74	0.61	0.7	0.46	0.63	0.47	0.63
	Range	4-5	4-5	3-5	3-5	4-5	4-5	3-5	3-5	4-5	3-5	3-5	3-5	4-5	3-5	4-5	3-5
15 days	Mean	4.27	4.2	4.13	4.33	4.27	4.27	3.87	4.07	4.27	4.2	4.2	4	4.2	4.27	4.13	3.87
	SD	0.59	0.55	0.63	0.47	0.59	0.59	0.34	0.59	0.59	0.77	0.67	1	0.55	0.59	0.63	0.83
	Range	3-5	3-5	3-5	4-5	3-5	3-5	3-4	3-5	3-5	3-5	3-5	2-5	3-5	3-5	3-5	2-5
30 days	Mean	4.33	4.33	3.93	4.2	4.13	4.27	4.2	4	3.93	4.2	4.07	3.87	3.87	4.07	4	3.8
	SD	0.48	0.47	0.59	0.67	0.63	0.44	0.41	0.87	0.8	0.55	0.59	0.91	0.74	0.44	0.75	0.86
	Range	4-5	4-5	3-5	3-5	3-5	4-5	4-5	4-5	2-5	2-5	3-5	2-5	2-5	3-5	2-5	2-5
45 days	Mean	4.4	4.4	3.8	4.27	4.4	4.33	3.8	4	4.2	4.13	4.07	4	4.13	4.07	4.13	4
	SD	0.5	0.5	0.67	0.7	0.5	0.47	0.55	0.84	0.56	0.74	0.79	0.84	0.63	0.7	0.74	0.84
	Range	4-5	4-5	3-5	4-5	4-5	4-5	3-5	2-5	3-5	3-5	2-5	2-5	3-5	3-5	2-5	2-5
60 days	Mean	4.27	4.33	4.13	4.27	4.07	4.27	4.2	4.07	4.4	4.53	4.33	4.13	4.33	4.33	4.07	4
	SD	0.46	0.48	0.34	0.44	0.07	0.44	0.41	0.7	0.5	0.51	0.72	0.63	0.61	0.48	0.59	0.75
	Range	4-5	4-5	4-5	4-5	2-5	4-5	4-5	2-5	4-5	4-5	3-5	3-5	3-5	4-5	3-5	2-5
75 days	Mean	4.33	4.2	4.47	4.2	4.33	4.2	4.44	4.2	4.27	4	4.2	4	4.2	3.39	4.07	3.8
	SD	0.49	0.41	0.51	0.41	0.49	0.41	0.5	0.41	0.7	0.67	0.67	1	0.67	0.7	0.7	0.86
	Range	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3-5	3-5	3-5	2-5	3-5	3-5	3-5	2-5
90 days	Mean	4.2	4.27	4.27	4.2	4.2	4.4	4.13	4.13	4	4.07	4.2	4	3.9	4	4	3.93
	SD	0.41	0.45	0.44	0.55	0.17	0.5	0.5	0.63	0.65	0.6	0.55	0.75	0.5	0.53	0.65	0.79
	Range	4-5	4-5	4-5	4-5	4-5	4-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5

NOTE : Mean values represent the average of determinants in three independant tests (n= 3x6 (judges) = 18).