3.00 % at ambient temperature after 6 month of storage. Statistically, similar results have been obtained in for total soluble solids, reducing sugars and total sugar (5 and 6). There was a decrease in TSS during storage interval. It reduced from 42^0B to 41.6^0B followed by 41.2^0B. Reducing sugar also decreased during storage conditions though the decrease in absolute terms was very minor.. After 3 months its decline was from 5.5 % to 5.39 % and finally to 5.26 % at ambient temperature whereas under refrigerated condition it ranged 5.5 % to 5.2 %. Total sugar content increased during storage period both under ambient as well as under refrigeration. In ambient condition, initially total sugar was 39.68% which increased to 44.28 % after 6 months whereas during refrigerated condition the increase ranged from 39.68 % to 44.32%.The comparatively minor increase in total sugar can be attributed to hydrolysis of polysaccharides in the acidic condition of the product during storage. Similar results have also been reported earlier also [18].

Table 7 depicts the effect of storage conditions and storage time on vit C content, carotene content as well as browning of carrot based appetizer, respectively. Both vitamin C content and carotene content decreased during storage both at ambient and refrigerated temperature whereas there was a slight increase in browning content during storage interval. Statistically, it is evident that there are significant difference in treatments for storage condition in case of vit C and browning whereas non-significant in case of carotene.

Storage intervals (I) Months	pH Storage condition (^{0}C)		Mean	Titrable acidity Storage condition (^{0}C)		Mean	Salt (%) Storage condition (^{0}C)		Mean
	Ambient	Refrigerated		Ambient	Refrigerated		Ambient	Refrigerated	
0	2.630	2.630	2.630	1.530	1.530	1.530	3.080	3.080	3.080
3	2.630	2.650	2.630	1.400	1.440	1.420	3.040	3.060	3.050
6	2.670	2.690	2.640	1.024	1.031	1.028	3.000	3.020	3.010
Mean	2.643	2.657		1.318	1.334		3.040	3.053	
CD (≥0.05) Storage intervals (I)= 0.033 Storage conditions (C)= NS C x I= NS AT= Ambient temperature (13-27°C); RT= Refrigerated temperature (0-4°C)									

Table 5: Effect of storage temperature and interval on pH, titrable acidity and of fermented carrot appetizer.

Storage intervals (I) Months	TSS(^{0}B) Storage condition (^{0}C)		Mean	Reducing sugars (%) Storage condition (^{0}C)		Mean	Total sugars (%) Storage condition (^{0}C)		Mean
	Ambient	Refrigerated		Ambient	Refrigerated		Ambient	Refrigerated	
0	42.00	42.000	42.000	5.500	5.500	5.500	39.680	39.680	39.680
3	41.60	41.800	41.700	5.390	5.410	5.400	41.100	41.130	41.115
6	41.200	41.500	41.350	5.260	5.290	5.275	44.280	44.320	44.300
Mean	41.60	41.767		5.383	5.400		41.687	41.710	
CD (≥0.05) Storage intervals (I)= 0.033 Storage conditions (C)= NS C x I= NS AT= Ambient temperature (13-27°C); RT= Refrigerated temperature (0-4°C)									

Table 6: Effect of storage temperature and interval on reducing sugars, total sugars (%) and vitamin C of fermented carrot appetizer.

The effect of storage temperature and interval on overall acceptability of fermented carrot appetizer has been summarized in table 8. There was decrease in overall acceptability score during storage. Fermented carrot based appetizer having initial overall acceptability score 8.355 was decreased to 7.990 after three months and finally to 7.505 after six months storage. Higher decrease was found under ambient conditions (7.847) as compared to refrigerated conditions (8.053).

In brief, it can be stated that during the storage of the appetizer for six months, there was no drastic change but only slight changes in all the physico-chemical and sensory characteristics except pH, reducing sugars and browning where significant changes had taken place. Overall, the changes during storage were very small and did not affect the acceptability.

Storage intervals (I) Months	Vitamin C Storage condition (^{0}C)		Mean	Carotene (mg/100 g) Storage condition (^{0}C)		Mean	Browning (OD at 440 nm) Storage condition (^{0}C)		Mean
	Ambient	Refrigerated		Ambient	Refrigerated		Ambient	Refrigerated	
0	16.120	16.120	16.120	4.033	4.030	4.032	0.262	0.262	0.262
3	14.967	15.057	15.012	3.860	3.890	3.875	0.269	0.265	0.267
6	14.123	14.147	14.135	3.710	3.740	3.725	0.276	0.272	0.274
Mean	15.070	15.108		3.868	3.887		0.269	0.266	
CD (≥0.05) Storage intervals (I)= 0.033 Storage conditions (C)= NS C x I= NS AT= Ambient temperature (13-27^{o}C); RT= Refrigerated temperature (0-4^{o}C)									

Table 7: Effect of storage temperature and interval on vitamin, carotene and browning of fermented carrot appetizer.

Storage intervals (I) Months	Storage condition (C)		Mean	Storage condition (C)		Mean
	Ambient	Refrigerated		Ambient	Refrigerated	
0	8.400	8.400	8.400	8.400	8.360	8.355
3	7.800	8.190	7.995	7.995	8.100	7.990
6	7.600	7.540	7.570	7.310	7.700	7.505
Mean	7.933	8.043		7.847	8.053	
CD (≥0.05) Storage intervals (I)= 0.033 Storage conditions (C)= NS C x I= NS AT= Ambient temperature (13-27^{o}C); RT= Refrigerated temperature (0-4^{o}C)						

Table 8: Effect of storage temperature and interval on taste and overall quality of fermented carrot appetizer.

Conclusion

It is concluded that lactic acid fermented pulp can be successfully utilized for the preparation of different products. For highest sensory characteristics treatment (50 % fermented pulp + 50 % unfermented pulp) as per the recipe in carrot gave the highest scores. During the passage of storage period, there was a slight decrease in all the physico-chemical and sensory characteristics except pH and browning. Thus, the developed technology can be commercially explored at industry level for production of the fermented processed products with probiotic effect.

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