

Storage stability studies and consumer acceptability of ready-to-consume kunun gyada powder

ABSTRACT

The shelf stability of ready-to-consume kunun gyada powder samples were evaluated for 9 months by analyzing changes in water activity, colour, development of peroxides and rancidity, microbiological changes and consumer acceptability of the product stored at $24\pm 2^\circ\text{C}$ and relative humidity of $41\pm 2\%$. Results showed stability in the water activity (aw) with a range between 0.37 and 0.61. The peroxide value (PV) range between 0.19-0.52 meq/kg, KGP5 had the lowest peroxide value 0.19 meq/kg. The thiobarbituric acid value (TBA) of the product was low during the 9 months storage period. Values range between 0.21-0.38 MAE/kg. The kunun gyada powder had no mold, yeast, bacteria and coliform growth during the storage period. The colour of the product in terms of whiteness (L^*) range between 85.47% - 72.22%, sensory attributes (colour, appearance, texture and overall acceptability) of the product evaluated based on a 5 point hedonic scale showed that colour of the product was acceptable after 9 months of storage, the texture and appearance of the product was stable during the storage period. The overall acceptability score showed that the KGP2 was more acceptable over the other products.

Keyword: Kunun gyada; Peroxide value; Thiobarbituric acid value; Consumer acceptability and microbiological changes