

## Development of Aloe Vera (*Aloe barbadensis*) Gel Cubes Incorporated Jelly

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Aloe vera (*Aloe barbadensis* Mill. or *Aloe vera* (L.) Burm. F.) gel derived from the leaf pulp has drawn considerable attention owing to its functional properties and exhibited wider applications in the food industry. The present study was aimed towards the development of jelly using Aloe vera (87.55%), sugar (9%), gelatine (3%), flavorings (0.25%), colorings (0.1%) and aromatic agents (0.1%). Jelly was made from removing latex and unwanted parts from leaves followed by the heat treatment at 65 °C for 15 minutes. Three levels of sugar content (1%, 5%, 9% (w/w)), three types of flavorings (strawberry, pineapple, and orange) and three types of aromatics (vanilla, rose and almond) were selected to determine the best combination. The final jelly was made from the best sugar level, flavor, and aroma. The prepared jelly was packed in polypropylene cups and stored at 4°C. The physicochemical properties were measured for the final jelly and data were analyzed using one-way ANOVA. Aerobic plate count was determined to evaluate the shelf life. Appearance, aroma, texture, taste and overall acceptability were evaluated as sensory attributes using a nine-point hedonic scale. Data were analyzed using the Friedman test with a 95% level of significance. Treatment with a 9% sugar level was selected as the best sugar level and strawberry and vanilla were selected as the best flavor and the best aroma, respectively. The pH, total soluble solids, and titratable acidity at the initial were  $5.034 \pm 0.001$ ,  $10.62 \pm 0.01$ , and  $0.050 \pm 0.001\%$  respectively. There was no significant difference ( $p < 0.05$ ) of total soluble solids during the four weeks of storage. However, there was a significant difference ( $p < 0.05$ ) in pH and titratable acidity with storage time. Based on the microbial analysis, the product is safe for consumption up to one month period. In conclusion, Aloe vera gel can be effectively utilized to develop jelly and further studies are required to increase the shelf life.

**Keywords:** Aloe vera, Jelly, Sensory evaluation, Shelf life