Assessment of Quality Parameters of Strained Yoghurt Incorporated with Germinated Mung Bean (*Vigna radiata*) Powder

D.M.M.D. Dunukara[1*], M.K. Ranasinghe[1] and D. Priyadarshana[2]

[1*]*Department of Animal Science, Uva Wellassa University, Badulla, Sri Lanka*
[2]*Chello Dairy Products (Pvt) Limited, Rathnapura Road, Godakawela 70160, Sri Lanka*

The present research was aimed to study the effects of germinated mung bean (*Vigna radiata*) powder on the physicochemical characteristics of strained yoghurt. The strained yoghurt was prepared according to the commercial guidelines by incorporating germinated mung bean powder and without germinated mung bean powder (control). A sensory evaluation was conducted to determine the suitable level of germinated mung bean powder from 1%, 1.5%, 2%, and 2.5% (w/w) using 30 untrained panelists. The control and the selected sample were tested for protein, fat, total ash, fiber, moisture, pH, titratable acidity (TA), Brix value, microbial quality for one month in seven days interval at refrigerated condition (4ºC). Based on the results of sensory evaluation, strained yoghurt with 2% (w/w) germinated mung bean powder was chosen as the best treatment. Results revealed that strained yoghurt with 2% germinated mung bean powder had the highest fat (3.46 ± 0.07%) and protein (7.48 ± 0.11%) contents compared to that of the control. Results showed that stained yoghurt with 2% germinated mung bean powder had the highest pH (4.59) during 4 weeks of the storage. Similarly, incorporation of germinated mung bean powder into strained yoghurts increased the TA compared to that of the control sample while a 2% germinated mung bean flour incorporated sample had the highest Brix value (18.66). The pH of strained yoghurt samples was decreased ($p>0.05$) during storage. TA and Brix values were increased ($p>0.05$) during the storage. Total plate count and yeast and mold counts in strained yoghurts were increased ($p>0.05$) with the incorporation of germinated mung bean powder during storage, however, the values did not exceed the permitted levels (SLS 824:2). Coliform was absent in all samples. In conclusion, germinated mung bean powder enhances the nutritional value and the sensory properties of strained yoghurts.

Keywords: Strained yoghurt, Titratable acidity, Germinated mung bean powder, Brix value