Physicochemical and Sensory Properties of Bahulu and Chocolate Mousse Developed from Pulses and Vegetable Canned Liquids

Floris Donatus[1], Mohd Dona Bin Sintang[2], Norliza Julmohammad[1] and Noorakmar Ab Wahab[1]*

[1]Faculty of Food Science and Nutrition, Universiti Malaysia Sabah, 88400 Kota Kinabalu, Malaysia, florisdonatus@yahoo.com, norliza@ums.edu.my, *aqemanur@ums.edu.my

[2]Nestle Research and Development Centre, Singapore, MohdDonaBin.Sintang@rd.nestle.com

Abstract: In food industry, egg white is the most common foaming agent for numerous aerated foods. As some pulses and vegetable canned liquids possessed comparable foaming properties as egg white liquid, this study was conducted to characterise Bahulu and Chocolate Mousse developed from 6 selected canned liquids. The TA.XT Plus texture analyser was used to describe the texture profile analysis of Bahulu. Meanwhile, the viscosity of Chocolate Mousses was determined by the viscometer. Furthermore, the protein, fat, ash, moisture, fibre and carbohydrate content in both products were also determined. The sensory evaluation was conducted among 40 panelists using 9-point hedonic scale. The results showed that the least hard, low in springiness and chewiness were observed in Bahulu A which was developed from vegetable canned liquid ($p<0.05$). In contrast, pulses canned liquid which was used in Bahulu N produced comparable hardness, fracturability, adhesiveness, springiness, cohesiveness, gumminess and chewiness with Bahulu control ($p>0.05$). Furthermore, the viscosity of Mousse A and D were lower than Mousse control ($p<0.05$). The utilisation of pulses and vegetable canned liquids in development of Bahulu and Mousse increased the protein content as compared to control samples ($p<0.05$). The lowest taste acceptance was observed in Bahulu N and P as well as Mousse N and P ($p<0.05$). This could be due to the saltiness derived from the pulses canned liquid. The appearance, odour, texture and overall acceptability of Bahulu and Mousse were comparable to control samples and well accepted by the panelists ($p>0.05$). Based on our results, it reveals that the pulses canned liquid has more potential in replace egg white in Bahulu and Chocolate Mousse development.

Keywords: egg white, pulses, bahulu, mousse, canned liquid