

## Sensory quality of pilot-scale prebiotic chocolates in Malaysia

### ABSTRACT

Prebiotic, such as inulin, has been applied as functional food and known for its various health benefit effects such as increased mineral absorption, improved immune response and colorectal cancer prevention. An attempt was made to determine the level of Malaysian consumers' acceptance and market potential of newly developed pilot scale prebiotic milk chocolates (MC-1) and dark chocolates (DC-1) with no sugar added as compared to control milk and dark chocolate (containing sugar), MC-0 and DC-0, respectively. Trained panels were employed to evaluate the sensory quality of the chocolate products using the quantitative descriptive analysis (QDA) technique and the 7-point hedonic scale was used by consumer panels. In comparison with control milk chocolate (MC-0), consumer and trained panels gave better ( $p < 0.05$ ) overall acceptance score for MC-1. Both MC-1 and DC-1 showed similar smoothness attribute ( $p > 0.05$ ) as control chocolates (MC-0 and DC-0). Similar likeness were shown by both trained panels and untrained Malaysian public consumers, where prebiotic milk chocolate MC-1 was the most preferred compare to prebiotic dark chocolate DC-1. This could be due to bitter taste driven by high cocoa liquor content in dark chocolate compared to milk chocolate. However, both type of prebiotic chocolates have high potential ( $>70\%$ ) to be bought by Malaysian consumers once introduced in the market.

**Keyword:** Consumer preferences; Dark chocolate; Milk chocolate; Pilot plant scale; Trained panel