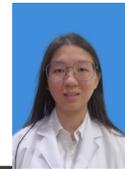


Development and Sensory Evaluation of Kuih Talam Padan using Isomaltulose

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1 Introduction

- Obesity had become one of the serious problems in Malaysia as Malaysia have the highest obesity rate among South-East Asia.
- Obesity is highly associated with type 2 diabetes, high blood pressure and heart disease.[1] There are 75% of Malaysian with type 2 diabetes have obesity. [1]
- Based on the MANS 2002/2003, the average consumed added sugar for adults in Malaysia are 21g of added sugar and 30g of sweetened condensed milk.[3] And this will lead to a higher risk of diabetes, obesity, and chronic diseases.
- This study will be conducted on kuih talam padan as kuih talam padan is one of the most famous kuih in Malaysia and can easily made.

2 Objective

To determine the sensory attributes and consumer acceptability of kuih talam padan made with sucrose and Isomaltulose

3 Methodology

Phase 1: Development of kuih talam padan

In this study, kuih talam padan will be developed in three variations which are 100% sucrose, 100% IM and 50% sucrose: 50% IM. Kuih talam padan with 100% sucrose served as reference sample.

Phase 3: Data Analysis

- The data collected was analysed using SPSS version 28.0 (SPSS Inc., Chicago, IL, USA).

Phase 2: Sensory evaluation.

Sample Size:

- n=37 (31F, 6M)

Sampling Method:

- Convenient sampling

Recruitment Method:

- Email Blast and convenient purposive sampling around Bukit Jalil Area

Inclusion Criteria:

- Aged 18-50 years
- Malaysian Adults (Prior Malays)

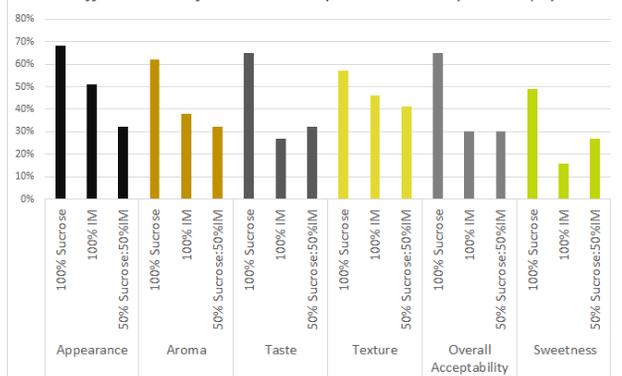
Exclusion Criteria:

- Individuals with diabetes/hypercholesterolemia
- Pregnant or lactating woman
- Chronic alcohol drinkers
- Under medications which will affect to the sense of taste

4 Results

The kuih talam padan with 100% sucrose, 50% sucrose: 50% IM and 100% IM were successfully developed. In term of appearance, aroma, taste, texture and overall acceptability, 100% sucrose has the highest rating. In term of sweetness, 100% sucrose obtain highest rating at just about-right. While doing the duo-trio test, 100%IM is more acceptable than 50% sucrose: 50% IM

Affective Test for all the sample kuih talam padan. (%)



6 Conclusion

Current study suggested that there were significant differences in the sensory attributes of kuih talam padan made with 100% sucrose, 50% sucrose: 50% IM and 100% IM. Thus, the null hypothesis I was rejected. Besides that, the overall acceptability showed difference in the three groups, thus null hypothesis II was rejected. The current study concluded that the incorporation of IM to substitute sucrose is possible in kuih talam padan and well accepted by the subjects. In term of price, kuih made with 100% sucrose is the cheapest. Among the three variations of kuih, 100% sucrose was the most acceptable by the subjects with highest score obtained in overall acceptability.

5 Discussion

Appearance: The caramelisation as sucrose shows more intense coloration compared to IM. And IM exhibits less caramelization when heated due to the lower melting point and higher stability of glycosidic bond

Aroma: The combination of the pandan, coconut milk and sucrose or IM might develop a different aroma. The aroma of kuih talam padan also maybe developed from caramelisation of sugar.

Taste: This might be due to sugar is the main taste in kuih talam padan and sucrose and IM have significant different in taste. [4,5]

Texture: Kuih talam padan is a low solubility product, thus, it is difficult to substitute sucrose with IM in kuih talam padan.

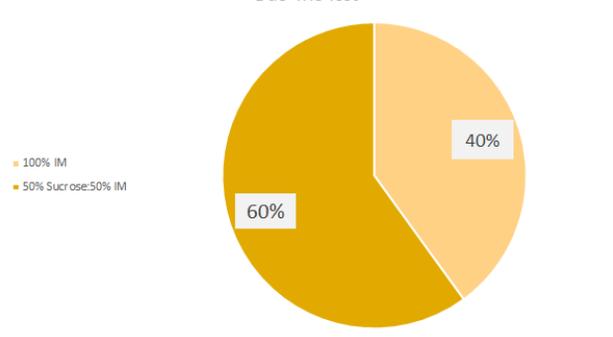
Overall Acceptability: sample with 100% Sucrose was rated the highest while the 50% Sucrose:50%IM and 100% IM have the same score.

Sweetness: Sucrose is sweeter in taste compared to IM. The sweetness of IM is only about 0.4 to 0.45 times of sucrose only. [6] Other than that, IM is only purely sweet without any side-tastes or aftertastes.

Sensory Attributes, Overall Acceptability and Sweetness between Samples



Duo-Trio Test



Related literature

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