The effects of thickening agents on the physicochemical and sensory Properties of date Palm juice

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Abstract:

In this study, effects of thickening agents on the physicochemical and sensory properties of the date palm juice wasinvestigated. Two types of dates cultivar were used in this study – Zaghloul and Deglet Noor. After conducting formulations, the base product was made with 75% Zaghlouldates and 25% Deglet Noor dates and this had been studied for the effects of stabilizers such as pectin, CMC, xanthan gum and gum Arabic used at 0.1% concentration (w/w). Results have shown that there were significant differences between stabilizers at 0.1% concentrations on the physicochemical properties of date palm juice ($p<0.05$). 31.43% of panelists liked most xanthan gum and pectin at 0.1% concentration in a juice sample. These samples were described as juices with sweet taste, fruity and natural date aroma. This study investigated the synergistic effects of pectin at 0.05% in combination with xanthan gum and CMC at varying concentrations - 0.01%, 0.025% and 0.05% (w/w). Significant synergistic effects on the physicochemical properties of juice samples produced by the combination of pectin with other thickening agents ($p<0.05$) were observed. Preference test results revealed that synergistic effects of stabilizers have no significant effect on liking scores of panelists on their sensory properties ($p>0.05$). In overall, panelists' most preferred product was the base juice formulation with xanthan gum at 0.05% concentrations and was positively described as juice having sweet aroma/taste, smooth texture, fruity aroma and has a natural date flavor.

Biography:

Kristine L. Mangundayao is currently studying PhD in International Hospitality and Tourism Management at Lyceum of the Philippines University-Batangas. She graduated a degree inMaster of Science in Food Biotechnology at Assumption University of Thailand. Her interests in research focus on food and beverage product development, hygiene and sanitation and gastronomy.

Speaker Publications:

1. Bioactivity of Moringa oleifera and its Applications: A Review, April 2017Journal of Pure and Applied Microbiology 11(1):43-50

2. Effects of types and amounts of stabilizers on physical and sensory characteristics of cloudy ready to drink mulberry fruit juice, published: 26 February 2015

3rd International Conference on Agriculture, Food and Aqua; Dubai, UAE - August 10 -11, 2020.

Abstract Citation:

Kristine L. Mangundayao, The effects of thickening agents on the physicochemical and sensory properties of date palm juice Agri Food Aqua 2020, 3rd International Conference on Agriculture, Food and Aqua; Dubai, UAE - August 10 -11, 2020.
(https://agriculture.foodtechconferences.com/)