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Heterotrigona Itama Kelulut Honey Dehydration Process to Prolong Shelf Life
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Abstract

One of the main challenges in the tropical honey industry such as kelulut honey is the naturally occurring high water content in the kelulut honey composition. If water content exceeds 22%, the fermentation process will occur at ambient temperature, spoiling the kelulut honey taste and reducing its shelf life. Therefore, the dehydration process is highly important to reduce the water content to less than 22% to halt the fermentation process in the kelulut honey. Nevertheless, the dehydration process has its own risk, it had been known that prolonged heating at elevated temperature has adverse effects on the quality of kelulut honey. In this study, a dehydration process was applied using indirect heating system to achieve a reduction of water content below 22% adhering to MS 2683:2017. The results have shown that for the lowest capacity of 1 kg kelulut honey, a reduction of water content below 22% was achieved in 2 hours while the highest capacity of 30 kg kelulut honey took 15 hours to achieve the reduction of water content below 22%. Finding from this study will benefit the small-scale kelulut breeders to prolong the kelulut honey shelf life via dehydration process. © 2023, The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd.

Author Keywords

Dehydration process; Kelulut honey; Shelf life; Water content

Index Keywords

Dehydration, Food products, Process control; % reductions, Adverse effect, Dehydration process, Elevated temperature, Fermentation process, Heating system, High water content, Kelulut honey, Naturally occurring, Shelf life; Fermentation

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