

Experimental analysis on a novel low-temperature vacuum drying with induced nucleation technique for dewatering stingless bees honey

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ABSTRACT

Honey spoilage is a major problem in storing stingless bee honey. A new method of honey dewatering was developed using a low-temperature vacuum drying with induced nucleation technique. The research's objective is to investigate the performance of this method in reducing honey's water content. Two different dewatering temperatures were applied until honey's water content reached below 20%. The honey's chemical compound before–after dewatering from one of the samples was tested using nuclear magnetic resonance (NMR) analysis. The dewatering rate improves significantly with higher temperature. The NMR analysis result found no changes in chemical compound before–after experiment except for ethanol.

KEYWORDS Dewatering; fermentation; honey; stingless bees; storage; water content