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Stingless bee honey, produced by various species of stingless bees, has garnered attention due to its unique physicochemical properties, potential health benefits, and the significant challenges associated with establishing safety and quality standards. The absence of formal norms complicates the commercialization and consumer trust in stingless bee honey products. The quality and safety of stingless bee honey in Thailand have garnered increasing attention. Research indicates that honey produced by stingless bees, particularly the *Tetragonula pagdeni*, exhibits distinct physicochemical characteristics contributing to its high market value and medicinal properties. In this study, 100 honey samples produced by three stingless bee species from 20 meliponaries were collected from eight provinces in five regions. Analyses were carried out under the Thai stingless bee honey standard.

The results reveal that the water content in honey was a major issue of honey quality, and it was linked to geography and species. The safety of honey, especially microbiologically data, was linked to the meliponary management and process of honey harvesting. Besides, some honey samples were contaminated with environmental and human pathogens. This study emphasizes the impact of processing among stingless bee species on honey quality and highlights the significance of understanding the quality of honey based on the geographical origin of stingless bees for consumers and producers.