

Yield, Composition, Texture, and Sensory Characteristics of Cottage Cheese Produced with the Incorporation of Different Herb Extracts

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Abstract	<p>Herb cheese is cheese that contains herbs extracted for their antioxidant and bioactive properties. This study aims to determine the impact of adding herb leaf extracts to cottage cheese on its yield, composition, texture, and sensory characteristics. Three different herbs were used to prepare the extracts: bidara (<i>Ziziphus mauritiana</i>), moringa (<i>Moringa oleifera</i>), and bay (<i>Syzygium polynthum</i>). Cottage cheese was made in the the following process: cheese made of full-fat milk (FF), cheese made of low-fat milk (LF), cheese made of low-fat milk + 20% bidara extract (LB), cheese made of low-fat milk + 20% bay extract (LS), cheese made of low-fat milk + 20% moringa extract (LM), cheese made of low-fat milk + 10% bidara extract + 10% bay extract (LBS), cheese made of low-fat milk + 10% bidara extract + 10% moringa extract (LBM), cheese made of low-fat milk + 10% bay extract + 10% moringa extract (LSM) and cheese made of low-fat milk + 6.67% bidara + 6.67% bay + and 6.67% moringa extracts (LBSM). Each treatment was replicated three times. The variables included cheese yield, compositions, texture profile, and sensory characteristics. Herb extracts resulted in a slight variation in cheese yields ranging from 7.73 to 13.8%. Full-cream milk (FF) cheese contained the least moisture, while low-fat bay+moringa (LSM) cheese contained the most protein and the least fat. The texture profile showed a significant difference in hardness, cohesiveness, adhesiveness, gumminess, and chewiness but the springiness and resilience were similar. Herb extracts significantly contributed to the variation of sensory characteristics, including flavor, aroma, texture, and color. Adding herb extracts produces cheese with a slightly grassy aroma and bitter flavor. The addition of bidara, moringa, and bay leaf extracts during the manufacture of cottage cheese from cow milk resulted in the variation in yield, textures, composition, and sensory characteristics. Adding herbs produces cheese with higher moisture content but lower ash content than non-herb cheese. Cheese made with the addition of bay leaf extract had a higher hardness level than the control cheese and cheese added with other herbal extracts. The addition of herbal extracts makes a noticeable color change in cheese.</p>
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