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Research article

ENHANCEMENT OF ANTIOXIDANT ACTIVITY, NUTRITIONAL COMPOSITION, AND CRUDE FIBER CONTENT IN MILKFISH SAUSAGE (*Chanos chanos*) THROUGH ADDITION OF MORINGA LEAF POWDER AND FRESH MORINGA LEAVES

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Abstract

This study investigates the impact of Moringa leaf powder and fresh Moringa leaves (*Moringa oleifera* L.) on the antioxidant activity, chemical composition, and crude fiber content of milkfish (*Chanos chanos*) sausage. Milkfish is valued for its high protein and omega-3 content but poses challenges in processing due to its numerous fine bones. Sausage production offers an effective way to debone and transform milkfish into a convenient and versatile food product. Incorporating Moringa leaves enhances its nutritional profile, as Moringa is rich in essential vitamins, minerals, protein, and antioxidants that provide various health benefits. This study employed a completely randomized design with three treatments: a control (K0), 6% Moringa leaf powder (K1), and 12% fresh Moringa leaves (K2), each replicated three times. Antioxidant activity was measured using the DPPH method, with data analyzed through one-way ANOVA followed by Duncan's Multiple Range Test at a 5% significance level. Results showed that both Moringa leaf powder and fresh leaves significantly increased antioxidant activity, with values of 0.7112% (K0), 16.8424% (K1), and 17.0608% (K2). The proximate composition and crude fiber content also improved significantly, demonstrating the potential of Moringa-fortified milkfish sausage as a functional food.