

## ABSTRACT

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### **MORINGA (*Moringa oleifera* Lam.) LEAVES AS A FOOD FORTIFICANT IN FOOD PRODUCTS: A REVIEW**

Thesis, Faculty of Science and Technology (2022).

(xiii + 49 pages, 4 tables, 4 figures, 2 appendices)

Moringa (*Moringa oleifera* Lam.) Leaves or *daun Kelor* is one of the parts of the Moringa plant which could be utilized for its micronutrient contents. The utilization of moringa leaves as a food fortificant could be one of the potential ways for treating malnutrition in children, pregnant and nursing women, and to fulfil the micronutrient intake. Moringa leaves contains anti-nutritional components (phytate and tannin) that could be best reduced through boiling at 100°C for 15 with oven-drying at 70°C for 5 hours as the most suitable method used to produce dried moringa leaves while preserving its micronutrient content. MOLP and/or MLP as a food fortificant is suitable for dry products such as bread, noodle and pasta, biscuit, cookies, crackers, snack bars, and food bars. MOLP and/or MLP as a natural preservative is suitable for chicken patties, ground beef, sausages, and nuggets. ME is suitable in the fortification of wet products like yoghurt. The addition of moringa leaves increases iron (16.55 to 33.33 mg/kg), calcium (0.09 to 0.15 mg/kg), vitamin C (up to 1.92%), protein (9.85 to 13.05%), and fiber content (up to 8.59%). The usage of MOLP is limited to a maximum amount of 20% as a food fortificant and >1% as a natural preservative as exceed amount could affect the sensory properties such as significant colour change to darker greener colour due to the high chlorophyll content, decreased in dough expansion which result in a less leavened product (especially bread products), tougher texture of product (biscuits, cookies, and crackers), slightly bitter taste in all products from bread to meat products and less tender and juicy in meat products due to higher water absorption capacity of moringa leaves.

Keywords : Moringa leaves, *daun kelor*, food fortification, food fortificants

Reference : 70 (2006-2021)