

## **A review on functional and nutritional properties of noni fruit seed (*Morinda citrifolia* L.) and its oil**

### **ABSTRACT**

Noni (*Morinda citrifolia* L.) is native to the Polynesian and recognized in the tropical and subtropical countries as a sustainable crop with feasible commercial applications. It has been reported that the interest in developing noni plant as a novel source of bioactive compounds are increasing by the day. This review describes the safety, nutritional values, and the properties of noni seed oil (NSO) with potential industrial uses. In particular, the bioactive compounds, anti-nutrients, antioxidant activity, and IC<sub>50</sub> values of noni seed and the chemical composition of NSO are also described. NSO has high contents of polyunsaturated fatty acids, total phytosterols and tocopherols that could be better choices for patients with high cholesterol and cardiovascular diseases. Extracts of noni seed have been shown to possess bioactive compounds that exhibit antioxidant, anti-mutagenic, anti-tumor, anti-inflammatory, anti-allergic, anti-viral, anti-fungal, anti-microbial, and anti-carcinogenic properties. Bioactive compound-rich noni fruit seed could be a potential source of functional foods. Moreover, noni seeds could be a valuable new source of vegetable oil because of its nutritional properties and non-toxic nature along with the increasing supply of seeds as by-products from noni juice industry. Comprehensive studies are needed on NSO to explore more potential product development. Moreover, further study is needed on the development of nutraceutical food products from noni seed by-products.