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## Functional and nutritional properties of rambutan (Nephelium lappaceum L.) seed and its industrial application: A review (Review)

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## Abstract

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Background: Rambutan (Nephelium lappaceum L.) is an important commercial fruit in southeast Asia and is gaining more attention in recent years because it is juicy and sweet and has a refreshing flavour and an exotic appearance. It is commercialized for fresh consumption and is industrially processed as canned fruit, juices, jams, jellies, marmalades, and spreads. The seed is a major co-product of this industry and is worthy of attention for industrial applications and their feasibility. Scope and approach: This review describes the composition of the rambutan seed, which is examined from a critical interpretation regarding the suitable use of this co-product. This review also compares the total yield, physicochemical and thermal properties of its fat for the purpose of evaluating the potential of this fruit co-product as a source of natural edible fat with potential industrial uses. Key findings and conclusions: Rambutan seed is a major co-product of the industry that has high premium-grade fat, protein, carbohydrate, fibre, antioxidants, and phenolic content and that can be used in several segments of the food, pharmaceutical, and cosmetic industries. Rambutan seed powders are also used as local medicine (they contain antidiabetic compounds) in Malaysia. To determine the effectiveness of raw rambutan seeds in treating diseases, in vivo and human clinical studies should be performed. Research should also continue to determine if rambutan seed fat can be fractionated, chemical and enzymatic interesterified, and blended with other fats to make cocoa butter alternatives. Comprehensive studies are needed on rambutan seed to explore more potential industrial applications. © 2020 Elsevier Ltd

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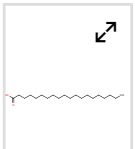
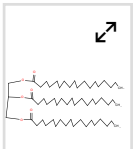

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