

***Morus alba* L. Plant: Bioactive Compounds and Potential as a Functional Food Ingredient**

ABSTRACT

Morus alba L. (*M. alba*) is a highly adaptable plant that is extensively incorporated in many traditional and Ayurveda medications. Various parts of the plant, such as leaves, fruits, and seeds, possess nutritional and medicinal value. *M. alba* has abundant phytochemicals, including phenolic acids, flavonoids, flavonols, anthocyanins, macronutrients, vitamins, minerals, and volatile aromatic compounds, indicating its excellent pharmacological abilities. *M. alba* also contains high nutraceutical values for protein, carbohydrates, fiber, organic acids, vitamins, and minerals, as well as a low lipid value. However, despite its excellent biological properties and nutritional value, *M. alba* has not been fully considered as a potential functional food ingredient. Therefore, this review reports on the nutrients and bioactive compounds available in *M. alba* leaves, fruit, and seeds; its nutraceutical properties, functional properties as an ingredient in foodstuffs, and a microencapsulation technique to enhance polyphenol stability. Finally, as scaling up to a bigger production plant is needed to accommodate industrial demand, the study and limitation on an *M. alba* upscaling process is reviewed.