

## **Pineapple (*Ananas comosus*): a comprehensive review of nutritional values, volatile compounds, health benefits, and potential food products**

### **ABSTRACT**

Pineapple (*Ananas comosus*) is a tropical fruit that is highly relished for its unique aroma and sweet taste. It is renowned as a flavourful fruit since it contains a number of volatile compounds in small amounts and complex mixtures. Pineapple is also a rich source of minerals and vitamins that offer a number of health benefits. Ranked third behind banana and citrus, the demand for pineapple has greatly increased within the international market. The growth of the pineapple industry in the utilisation of pineapple food-based processing products as well as waste processing has progressed rapidly worldwide. This review discusses the nutritional values, physicochemical composition and volatile compounds, as well as health benefits of pineapples. Pineapple contains considerable amounts of bioactive compounds, dietary fiber, minerals, and nutrients. In addition, pineapple has been proven to have various health benefits including anti-inflammatory, antioxidant activity, monitoring nervous system function, and healing bowel movement. The potential of food products and waste processing of pineapples are also highlighted. The future perspectives and challenges with regard to the potential uses of pineapple are critically addressed. From the review, it is proven that pineapples have various health benefits and are a potential breakthrough in the agricultural and food industries.

**Keyword:** Health benefits; Nutritional value; Physicochemical composition; Pineapple; Volatile compounds