

Application of ultrasound treatments in processing and production of high quality and safe juices and added-value by-products

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Fruits are excellent sources of healthy nutrients, and their consumption as fresh or fresh like juices has been increasing steadily. Industries traditionally use thermal processing units operations for preserving juices. However, heat treatments impact the nutritional and sensory characteristics of the final fruit products negatively. Sonication is being considered excellent alternative processing in juices preservation. Its combination with mild heat also presents promising and synergetic results.

On the other hand, fruit peels, a by-product of juice industries, are generally not used for human consumption, although the majority are also important sources of nutrients. If well preserve, the peels can be used to produce ingredients to be used in functional products, for example, incorporated into bakery products, contributing to achieving a successful circular economy.

In this oral presentation, research results on the use of ultrasounds for preserving different juices, such as orange, kiwi or blueberry, and corresponding by-products will be presented.