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### **Almond quality as influenced by microwave treatment for disinfestations**

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**A**lmond is one of the most valuable edible nuts in the world with distinctive taste, nutrient and texture. The major problem in production, processing and storage of almond is insect infestation. The major potential quarantine treatment methods used for postharvest control of insect pests in raw almonds are chemical fumigation, ionizing radiation, controlled atmosphere, conventional hot air/water heating, and dielectric heating using radio frequency (RF) and microwave (MW) energy etc. Increased regulation of chemical fumigants has forced the almond industry to seek non chemical alternatives for postharvest control of insect pests. The objective of this paper is to evaluate the effect of the short time microwave-heat treatment on quality and storability of almonds. The microwave oven with 2.45 GHz frequency was used to see the effects of the microwave treatment on almonds. Almonds were exposed to different microwave power levels i.e., 120, 240, 360, 480 and 600 Watts for the exposure time of 30, 60, 90 seconds. Quality attributes such as color, water activity, texture, peroxide value, fatty acid and iodine value of the fresh and treated almonds were studied immediately after the microwave treatment and after storage of 6 months.

#### **Biography**

Harshala Patil has completed her MTech at the age of 23 years from IIT Kharagpur in Post Harvest Engineering. She has worked with microwave assisted hot air drying of fruits and vegetables. Currently, she is enrolled in the Ph.D. program in IIT Bombay and her Ph.D. topic is microwave applications in food processing, in which she is going to apply the microwaves for blanching, drying and disinfestations of various food type, such as fruits, vegetables, nuts and spices.

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