

7th Indo-Global Summit and Expo on
Food & Beverages

October 08-10, 2015 New Delhi, India

Effect of ultrasonication on the phytochemical potential of dried pomegranate peel and pomegranate pomace powder

Gagandeep Kaur¹, Radhika¹, Vikas Kumar¹, Gitanjali Vyas², Vanshika Handa¹ and Prakriti Jnawali¹

¹Lovely Professional University, India

²Dr. Y.S. Parmar University of Horticulture and Forestry, India

An attempt was made to study the effect of ultrasonication assisted extraction method on the phytochemical potential of dried pomegranate peel and pomegranate pomace powder. The dried peels (at 50°C) from different sources were sonicated for different times (10, 20, 30 minutes) by using ultrasonic interferometer for liquids (F-80) and were analyzed for various phytochemical properties such as phenolic content, tannin content, anthocyanin content, carotenoids content, crude proteins and antioxidant activity. It was observed that with increase in the sonication time, there was a gradual increase in antioxidant activity (83.81-86.99%), phenolic content (118.35-162.30 mg GAE/100 g), tannin content (103.35-48.25 mg TAE/100 g), whereas, the change in the anthocyanin content, carotenoids content and crude protein content was non-significant. Among the different sources i.e., peel powder and pomace powder irrespective to sonication time, highest antioxidant activity (86.41%) and tannin content (152.18 mg TAE/100 g) was observed in sonicated peel powder, whereas, highest total phenolic content (147.41 mg GAE/100 g) and total anthocyanin content (8.18 mg/100 g) was observed in the sonicated pomegranate pomace powder. The difference for carotenoids and protein content was non-significant among the different sources of peel powder. Therefore, it is concluded that on the basis of the phytochemical properties, the results of these two sonicated sources were almost comparable which ensure a better utilization of the waste from pomegranate processing industry for development of different phytochemical enriched food products.

Biography

Gagandeep Kaur is currently pursuing her Master's Research in the area of Nutrition and Dietetics from the Department of Food Technology and Nutrition at Lovely Professional University, Punjab, India. Her research interest includes development of health and functional foods.

vkchoprafst@rediffmail.com

Notes: