



Ajita Tiwari

Karlsruhe Institute of Technology, Germany

Comparative study of different drying techniques on quality attributes of TASHE (*Cyathea gigantea*)

North east India is a rich and vibrant source of many indigenous plant produce. Because of lack of proper connectivity to the rest of India, local problems, language barriers and lack of proper infrastructure, many important plants and their parts are un-utilized though having high medicinal values and functional properties too. Tashe (*Cyathea gigantea*) is one among them species of tree fern. Due to high moisture content, it is difficult to store it for long period. Thus drying is most suitable means to reduce the moisture content but to retain its functional as well as medicinal properties three different types of drying techniques were taken into consideration namely sun, solar and tray drying. Solar drying was found to retain better quality of the dumplings of Tashe compared to those dried using Sun drying and tray dryer. Protein and carbohydrate content retention under solar drying was (1.25% and 61.85%) compared to tray drying (1.17% and 61.23%) and sun drying (1.12% and 60.66%). Antioxidant (% scavenging activity) retention under solar drying was (22.69%) compared to tray drying (19.47%)

and sun drying (18.26%). By analyzing the effect on drying of tashe dumplings on the loss of moisture, overall colour change, retention of functional properties and sensory quality, it could be concluded that tray drying followed by solar is the best method and also at minimum cost and time (330 mins).

Speaker Biography

Ajita Tiwari is an Assistant Professor in the Department of Agricultural Engineering at Assam University Silchar (A central University), Assam, India. Presently working as Guest Scientist in LVT, Karlsruhe Institute of Technology, Karlsruhe, Germany. She has acquired proficiency in the field of postharvest processing through her experience in food industry, research, and teaching by working at the National and International level for more than 12 years, with particular experience in the production and quality control of processed food products exdrudate RTE snacks. She has published 1 books (National) 2 book chapters (both International), more than 25 research papers in national and international journals as well as many conference (National and International level) papers. Professor Tiwari acquired her bachelor degree in Agricultural Engineering from JNKVV, Jabalpur, master's degree in Postharvest Process and Food Engineering from GBPUA&T, Pantnagar, and PhD in Food Process Engineering from Indian Agricultural Research Institute, New Delhi, India.

e: ajitatiwari@gmail.com



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