Technology for extraction of wood apple (Feronia limonia) juice

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The effect of steaming, enzymatic action and combined treatments as pre-treatments as well as different juice extraction machines on juice yield and total soluble solids of wood apple (Feronia Limonia) juice was studied. Pretreatments i.e. steaming for 2, 4, 6 and 8 minutes and enzymatic treatment (pectinase and cellulase enzyme) at different concentration (10, 20 and 30 mg/100g), incubation time (2, 4 and 6 hrs) and incubation temperature i.e. 40oC and combined enzymatic treatments of pectinase and cellulase enzymes in different proportions (3:7, 5:5 and 7:3) as well as combined optimized treatments (steaming and enzymatic treatments) followed by three juice extraction machines i.e. basket centrifuge, screw type juice extractor and fruit pulper at different rpm were studied and evaluated for juice recovery (%) and total soluble solid (TSS) content of juice from wood apple fruit pulp. Combined optimized pretreatment i.e. 6 min of steaming, combination of pectinase and cellulase (7:3), 30 mg/100g combined enzyme concentration, 6 hrs of incubation time at 40oC incubation temperature obtained maximum juice recovery (82.85%) and TSS content (5.30°Bx) of juice from wood apple pulp. The Screw type juice extractor obtained highest juice recovery (86.9%) and TSS (5.6°Bx) at 150 rpm followed by basket centrifuge and fruit pulper. The data was statistically analyzed by using completely randomized design (CRD).

Biography

Harsh Prakash Sharma is pursuing his in-service PhD in Food Processing Technology in “Technology for Production and Preservation of clarified juice from wood apple fruits”. Currently, he is serving as an Assistant Professor in College of Food Processing Technology and Bio-energy, AAU, Anand, Gujarat, India. He has more than six years’ experience of teaching and research as well as approx. 5 years’ experience of reputed food processing industries. He has published more than 15 research papers in various national and international journals. He is also a member of several scientific societies and editorial boards in various reputed journals.

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