

Effect of Lime Concentration and Soaking Period for the Quality of Bleached Ginger (*Zingiber officinale*)

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Bleached ginger is widely used for medicinal purposes in Ayurvedic and oleoresin extraction. It is mainly imported from India, but there is a potential to produce bleached ginger in Sri Lanka by using local varieties. Therefore, this Study was initiated with the aim of determining the best lime (Calcium oxide) concentration and soaking period to produce high quality bleached ginger, treatments were 0%, 1%, 2%, 4% lime concentrations and 2 hr, 4 hr, 6 hr soaking periods with three replicates. Moisture content, oil content, oleoresin content, calcium content and colour were evaluated as quality parameters. Results revealed that the oleoresin percentage, oil percentage, calcium percentage, colour difference and lightness difference of bleached ginger were depend on soaking period and lime concentration. Oil percentage decreased with increasing soaking time and lime concentration. The highest oil percentage was obtained by the ginger sample which was soaked two hours in 1% lime solution (1.05%). Oleoresin content increased with the lime concentration but decreased with increasing soaking time. The highest oleoresin percentage (9.35%) was obtained by the ginger sample which was soaked six hours in 4% lime solution. Calcium content of unbleached ginger was 1.44%. The highest calcium content (1.94%) was obtained in the ginger sample which was soaked in 4% lime solution for 6 hr. The lowest total colour difference (dE) and the highest lightness (L) were obtained the treatment which soaked in 4% lime for 6 hr compared to the market sample imported from India. According to the all quality parameters, with soaking in 4% lime concentration for six hours found to be the best treatment to produce bleached ginger.

Key words: Bleached ginger, Lime concentration, Soaking period