

Development of foam mat dried soursop powder using arabic gum and fish gelatin as foaming agent

ABSTRACT

Soursop is also known as *Annona muricata* from Annonaceae family. Soursop flavour has been described as a combination of strawberry and pineapple, with sour citrus flavor. The foam mat drying is a process in which the transformation of products from liquid to stable foam followed by air drying. The foam mat drying process is reported to be considerably cheaper than vacuum, freeze and spray drying methods. Foam mat drying was done using different foaming agents at various concentration: fish gelatin (FG: 5, 10, 15, 20%) and arabic gum (AG: 2, 4, 6, 8%). Foam properties and physicochemical properties such as bulk density, tap density, pH, moisture content, water activity, total phenolic content, color and flowability of powder were analyzed. Increasing the concentration of foaming agents showed a decreasing trend of the total phenolic contents and the value ranges from 222 to 453 mg GAE/100 g. Soursop powder with fish gelatin has higher total phenolic content compared to sample with Arabic gum. Soursop powder with both foaming agents showed an excellent flowability.

Keyword: *Annona muricata*; Foam mat drying; Foaming agent; Fish gelatin; Arabic gum