

Abstract

Research Topic : The Production Process of Indian Gooseberry Instant Powder by Foam-mat Drying method
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In the selection of Indian Gooseberry Instant Powder produced by four formulas of Foam-mat Drying, the sensory evaluation by 45 panelists using 9-Point Hedonic Scale method on color, smell, sweetness, sourness, bitterness and the overall preferences indicates that the most acceptable formula of Indian Gooseberry Instant Powder among the testers is the formula that consists of 50 % Indian Gooseberry concentration, 49.9% granulated sugar and 0.1% salt. The study of 10 types of foaming agents including Methocel65 HG, Egg albumin, Glyceryl monostearate (GMS), Carboxy methyl cellulose (CMC), Methocel65 HG mixed with Egg albumin, Methocel65 HG mixed with GMS, Methocel65 HG mixed with CMC, Egg albumin mixed with GMS, Egg albumin mixed with CMC and GMS mixed with CMC with the mixing ratio of two substances, which is 1:1 by weight, dissolving in water to receive the concentration of 1% by weight, shows that only one Egg albumin solution of 1% concentration by weight can create the most stable and suitable foam in Indian Gooseberry water that can be used in the study of the production of Indian Gooseberry Instant Powder by Foam-mat Drying.

The study of the amount of Egg albumin solution with 1% concentration by weight and the suitable drying temperature in producing the Indian Gooseberry Powder, evaluating from the density and the stability of the foam, overrun, rehydration, the dissolution and the amount of vitamin C, shows that the most suitable amount of Egg albumin solution with 1% concentration by weight is 37.25% and 47.25%. The suitable drying temperature is 70 degree Celsius for 90 minutes. The sensory evaluation by 15 panelists using 9-Point Hedonic Scale Method on color, smell, sweetness, sourness,

bitterness and the overall preferences along with making a comparison with two brands of the ready-to-drink Indian Gooseberry products that are available in the market, the result shows that the Instant Gooseberry Powder Juice made by Foam-mat Drying method, using 47.25% of Egg albumin solution with 1% concentration by weight under 70 degree Celsius for 90 minutes drying process, receives the highest preference score of 6.93. The moisture content of dried product was 1.78% dry weight basis, the water activity value of 0.17 and rehydration was 79.20% dry weight basis. It takes 36 seconds in dissolution. The L, a*, b* color value after drying is 91.14, 0.46 and 9.58 respectively. The amount of vitamin C is 413 mg/100 ml, the instant making powder had 35.75% (w/w) of production yield.