

Freeze Drying Characteristics Of Medicinal Herbs

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Abstract

The demand on traditional herb medicine shows a tremendous increase. Conventionally, medicinal herbs are dried at high temperatures, causing quality deterioration. The freeze-drying characteristics of medicinal herbs were studied, and the quality of the freeze-dried products assessed. The herbs studied were medicinal ginger and Javanese pepper.

It was found that drying time, was more influenced by chamber pressure and freezing rate than by the surface temperature of the product. Higher chamber pressures and faster freezing rates tended to shorten the initial (primary) drying time but lengthen the secondary drying time. Quality of the freeze-dried product was assessed as slightly lower than the quality of the raw material, but higher than when oven dried at 35-40°C, and met the MMI standard.

Keywords: Herb medicine; Freeze drying characteristics; Quality assessment