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RESEARCH PAPER

Evaluation and quality characteristics of potato powder

■ HIMANSHU SHEKHAR PANDEY *, VINAY KUMAR NAYAK AND PRASHANT PISALKAR

Faculty of Agricultural Engineering, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA (Email: himanshu.shekharpandey@gmail.com)

*Author for Correspondence

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SUMMARY :

Potato, the most valuable tuber crop is produced in 150 countries. In volume of production, it ranks fourth after wheat, maize and rice. Potatoes are a non-fattening, nutrition's and wholesome food, which supply many important nutrients to the diet. Varieties of potato such as Kufri Chandramukhi, Kufri Lauvkar, Kufri Jyoti, Kufri Naveen, Kufri Moti, etc. are in preparation of food item in India. Potatoes were cleaned, washed, peeled, sliced and blanched. Then fluidized bed dryer was used for the dehydration of potato chips. After drying, the slices were grinded in grinder and sieved through 100 mesh screen and packed in aluminum coated LDPE bags. The physical and microbiological qualities were evaluated just after preparation of potato powder and at the interval of 15 days up to 90 days during storage at room temperature. The moisture content of sample decreased slowly with increase in drying time and attained final equilibrium moisture content. The equilibrium moisture content values were higher for sample dried at 60^0C compared to those dried at 70 and 75^0C. Browning index of potato powder increased with storage period and the samples blanched with KMS had lower value of the browning index than the hot water blanched samples. Experiment was conducted to study the fluidized bed drying of potato chips at different air temperature, air velocity and pretreatment combination. Potato powder sample were packed in aluminum coated LDPE bags and stored at room temperature. Studies on quality were based on physical characteristics (*viz.*, moisture content, browning index) and microbiological characteristics (Total plate count), which were determined for fresh and stored sample. The storage studies were conducted at interval of 15 days up to 75 days.

KEY WORDS : Potato, Browning index, Fluidized bed dryer, Total plate count, Potato powder

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