

FEATURES AND QUALITY ASPECTS OF DRIED TURMERIC USING DIFFERENT DRYING METHODS



By

K. G. J. S. Navodi



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Main Library, Eastern University, Sri Lanka

Department of Biosystems Technology

Faculty of Technology

Eastern University, Sri Lanka

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ABSTRACT

Drying is one of the most important steps for plant materials to be used in medicinal and dietary products. There are various methods of drying, such as using the sun, oven, solar, warm air oven and freeze drying. The quality of turmeric powder obtained from the sun dryer, oven dryer and air conditioning dryer was studied. Fresh turmeric rhizomes were processed into powder, and samples were generated from the turmeric powder by using sun drying, oven drying and air conditioning drying. The processed turmeric powders were subjected to the effect of drying methods on turmeric quality parameters. Results showed the oven-dried turmeric significantly showed lower moisture content (6.2%) compared to air conditioning dried (7.3%) and sun-dried (8.7%) samples. The oven-dried method showed 50.9% more phenolic compounds than sun drying and 20.0% more than air conditioning drying. The oven-dried turmeric exhibited the highest water absorption capacity (3.24g/ml), which was 37.9% higher than sun-dried (2.35 g/ml) and 16.5% higher than air conditioning dried (2.78 g/ml) samples. The oven-dried turmeric showed the lowest titratable acidity (2.12%), which was 25.6% lower than sun-dried (2.85%) and 9.4% lower than air conditioning dried (2.34%) samples. Among the quality index analysis of turmeric samples oven-dried method achieved the highest value than the sun-dried method and air conditioning dried method. Therefore, oven-drying is used to produce turmeric powder for better nutrient and quality retention.

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