

## Effect of different dehydration techniques for preservation of selected garden flowers

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In the present era of eco-consciousness, the use of natural products like dry flowers and their parts has become the premier choice of the masses in their lifestyles for interior decoration. Therefore, definitely, future prospects of the dry flower industry are expected to contribute a lot to the country's economy in comparison to the fresh cut-flowers, cut-foliage and other live plants. Therefore, the present study was conducted to study the effect of different dehydration techniques and their efficacy on drying of selected flowers, which are locally available. There were nine dehydration treatments such as air drying (hanging method), press drying, embedded in sand and silica at room temperature, hot air oven drying embedded in sand and silica, microwave oven drying embedded in sand and silica and freeze drying and five different garden flowers such as *Rosa sinensis* (Rose), *Tithonia diversifolia* (wild Sunflower), *Zinnia elegans* (Zinnias), *Tagetes erecta* (Mexican marigold), and *Gomphrena globosa* (Globe amaranth) were selected for this experiment. The experiment was arranged in two-factor factorial, Completely Randomized Design with three replicates and data were subjected to analysis of variance (ANOVA) using statistical software MINITAB 17. Quantitative parameters such as moisture loss percentage, drying time, drying rate, reduction in diameter, color were recorded and analyzed statistically. In addition, quality parameters such as shape, brittleness, overall acceptability were recorded based on visual observation. The results have indicated that freeze drying is the best dehydration technique for flowers such as rose, zinnia, and globe amaranth with highest moisture loss percentage, fastest drying rate with shorter drying time and also with minimum change in flower original shape, firmness and colour, followed by hot air oven drying method.

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