

Comparison of different methods of drying in rose cv. GLADIATOR

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ABSTRACT

An investigation to compare the different methods of drying was carried out in the Department of Floriculture and Landscaping K.R.C.College of Horticulture, Arabhavi in 2002-03. The rose cultivator used for the experiment was Gladiator. The half opened rose flowers were treated with appropriate concentration of (1:5) for 12 hours and 8 treatments were followed in the experiment under average room temperature and relative humidity. The data recorded were analyzed by following factorial CRD. With respect to drying methods shade drying was best for quality parameters scoring viz., colors (3.41), shape (3.45), appearance (4.05) and texture (4.10). Sun dried flowers showed the least acceptable quality. Silica gel was the most promising desiccant. The interaction effect showed that shade drying by embedding in silica gel would yield the best quality dried flowers as it scored best for all the quality parameters and was at par with oven drying with silica gel as embedding material.

Key words : Drying, Rose, Flower, Quality

INTRODUCTION

Rose is an ornamental shrub with upright as climbing stems generally with thorns. Rose flowers are beautiful having exquisite shape, size, diverse colours with delightful fragrance. Rose is the best cut flowers and as such is in great demand in both domestic as well as in international markets. Dry flowers are an important product of the floral industry which is picking up at a faster rate in the international trade. Dried flowers are long lasting and therefore, economical and can be reused several times. The life of dried flowers varies with different flowers according to the species, texture of their petals and consistency of flowers. Existing technologies are not advanced enough to support future expansion of the dry flowers industry. Hence, the present study was undertaken for comparison of different methods of drying to determine the most effective method for drying.

MATERIALS AND METHODS

An investigation was carried out during 2002-03 in the Department of Floriculture and landscape gardening, K.R.C. College of Horticulture, Arabhavi, Dharwad using popular rose cultivar Gladiator, the flowers were harvested at half opened stage and sheared with appropriate concentration of glycerol in the ration (1:5) for 12 hours and 8 treatments were imposed. Different drying methods viz., solar drying, shade drying, oven drying, microwave oven drying were carried out alone

and in combination with the desire silica gel. Drying average room temperature recorded ranged from 24^o C to 34^o C and 68 per cent relative humidity. Factorial Complete Randomized Design was followed for the experiment with 3 replications. Five flowers were used per replication and were treated with 8 different treatments viz., sun drying, shade drying, oven drying, microwave drying, embedding in silica gel to sun drying, embedding in silica gel oven drying and embedding in silica gel + micro oven. At the end of drying the petals of the flowers were pressed with fingers to check the presence of moisture. Statistical analysis was carried out by following CRD given by Sundarraj *et al.* (1972).

RESULTS AND DISCUSSION

Parameters like dry weight, moisture time taken for drying, colour shape, appearance and texture of dry flowers as influenced by different drying methods are presented in Table 1 and 2. The significant difference was seen by all the treatments with respect to dry weight and moisture loss.

Flowers which were dried by silica gel took 65 hrs as compared to the flowers dried with embedding which took only 51.84 hrs, shade drying took maximum time of 131.50 hours whereas microwave oven drying took only 0.031 hours. Interaction effects showed that maximum time of 143 hours was taken by the rose flowers without embedding in shade, while microwave oven took minimum

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