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Effects of introduced vase solutions, commercial floral preservatives and germicides on postharvest quality of cut roses (*Rosa hybrida* L. 'First Red')

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The effects of two introduced international vase solutions; Ottawa Solution and Standard Vase Solution, four commercial floral preservatives; Chrysal clear®, Flower fresh®, Flora 2000® and Biovin®, and two germicides; 8-HQS and $CuSO_4$ were tested on cut roses (*Rosa hybrida* L., 'First Red'). Vase solutions were evaluated for their effects on vase life, maximum weight gain in fresh weight, solution uptake rate, variation of pH, conductivity and redox potential of vase solution during the vase life period.

Longest vase life and highest gain in fresh weight of roses were observed with Ottawa Solution. $CuSO_4$ was ineffective in gaining fresh weight and increasing vase life. Changes in pH, conductivity and redox potential were inconsistent. Redox potential values and conductivity values on the rose data indicated that the best were the average values of Ottawa solution during 2-4 days for keeping quality. However the relatively low values observed in redox potential and conductivity at the end of vase life showed that cut roses in Ottawa solution indicated the best keeping quality. Also it maintained the pH close to 4.0 indicating good postharvest quality. Longest vase life (11-8 d) and highest fresh weight gain of flowers (9.5-7.0 %) was observed in stems placed in Ottawa solution, 8-HQS (germicide) and Chrysal clear®, Flora 2000®, Flower fresh™ (preservatives).

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