

Floralife® RESEARCH UPDATE

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Sanitized Water vs. Flower Food

Background

Several novel water treatment technologies have emerged in recent years that produce sanitized water that can be used in numerous applications requiring microbe-free water. Due to its ability to keep water clean, it has been claimed that this type of water can perform as good as traditional flower food for maintaining cut flower life. However, these water treatments lack an energy source for flowers (sugars) which is a key ingredient in flower food.

Research

An experiment was conducted at the Floralife® laboratory comparing the performance of sanitized water to flower food. Sanitized water obtained from a system that adds a dilute mixture of mild oxidants, mainly hypochlorous acid was used in this study. This sanitized water was compared against standardized water* with or without flower food (Floralife Crystal Clear®). Rose, carnation and chrysanthemum flowers were held in these different vase treatments, and the vase life was determined.

**Standardized water was made by dissolving 0.7 mM CaCl₂, 1.5 mM NaHCO₃ and 0.005 mM CuSO₄ in deionized water. The alkalinity and hardness of this standardized water were 80 ppm and 120 ppm, respectively).*

Results

Vase life of flowers (days) in different water treatments

Treatment	Rose vase life	Carnation vase life	Chrysanthemum vase life
Standardized Water	3.4	12.7	10.5
Sanitized Water	3.8	14.8	7.5
Standardized Water with Flower Food	12.0	16.9	17.2
Sanitized Water with Flower Food	6.7	16.0	8.2



Standardized water
No flower food

Sanitized water
No flower food

Standardized water
Flower food

Sanitized water
Flower food

Figure. Appearance of flowers on day 9.

Conclusion

The data indicate that sanitized water is not suitable as a replacement for traditional flower food. Sanitized water also caused toxicity in rose and chrysanthemum leaves which resulted in reduced vase life.

For more information or to download a copy of our "Care and Handling Manual" online, visit www.floralife.com. Questions? e-mail: info@floralife.com

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