

Ashley Blackwell
Postharvest & QA Scientist - FloraLife

BACKGROUND:

FloraLife® Shield Ultra is a postharvest dip or spray product designed to protect cut flowers from adverse conditions as they travel from farms to the end consumer. FloraLife® Shield Ultra is engineered to maintain the quality and consistency of cut flowers throughout the distribution chain. It is a concentrated product which results in less water usage, packaging, transport, and reduced waste.

In this research update, we present data collected on the vase life, degree of flower opening, and color vibrancy in 6 cut rose cultivars treated with FloraLife® Shield Ultra.

OBJECTIVE:

These experiments were conducted to observe the effect that FloraLife® Shield Ultra had on the vase life, flower opening, and color vibrancy of several varieties of cut roses compared to control.

METHODS:

Flowers were obtained from a commercial source and received at the FloraLife laboratory where they were unpacked upon arrival. Stems were processed, and the rose heads were dipped for 5 seconds in the treatment solutions listed below. Stems were placed into FloraLife Crystal Clear® (16ml/L) solutions and flower heads were allowed to dry for 24 hours post dip treatment. After drying, the vases were placed into a sealed bucket for 72 hours to create a high humidity environment around the flowers. They were then removed from the buckets and kept at 20°C, with 12 hours light/12 hours dark each day for consumer vase life analysis. Vase life data was recorded daily with color and flower opening ratings taken on vase life day 7. There were 3 replicates per treatment per experiment.

TREATMENTS:

1. Control
2. Rose heads dipped in FloraLife® Shield Ultra (1mL/L)

RESULTS:

Table 1. Vase life (days) averaged over 5 experiments

Treatments	'Freedom' Rose	'Pink Floyd' Rose	'Hot Princess' Rose	'High & Magic' Rose	'Gotcha' Rose	'Queen Berry' Rose
Control	5.9	2.3	4.3	6.6	7.1	3.2
Rose heads dipped in FloraLife® Shield Ultra	11.5	14.4	9.8	11.3	14.6	8.3

Table 2. Flower opening (on a scale of 1-5; tightly packed head to fully open) averaged over 5 experiments

Treatments	'Freedom' Rose	'Pink Floyd' Rose	'Hot Princess' Rose	'High & Magic' Rose	'Gotcha' Rose	'Queen Berry' Rose
Control	2.6	3.4	2.6	3.1	2.4	2.2
Rose head dipped in FloraLife® Shield Ultra	3.3	3.5	3.6	3.9	4.1	4.3

Table 3. Color rating (on a scale of 1-4; dull/bluing to above average vibrancy) averaged over 5 experiments

Treatments	'Freedom' Rose	'Pink Floyd' Rose	'Hot Princess' Rose	'High & Magic' Rose	'Gotcha' Rose	'Queen Berry' Rose
Control	1.8	1.9	1.3	1.7	2.1	1.0
Rose head dipped in FloraLife® Shield Ultra	3.5	4.0	3.4	3.7	3.9	3.8



Ashley Blackwell
Postharvest & QA Scientist - FloraLife

Photos on day 7

Control



FloraLife® Shield Ultra



Cut rose varieties in photo: 'Freedom,' 'Hot Princess,' and 'Queen Berry'.

Control



FloraLife® Shield Ultra



Cut rose varieties in photo: 'Freedom,' 'Hot Princess,' and 'High & Magic'.



Ashley Blackwell
Postharvest & QA Scientist - FloraLife

Control



FloraLife® Shield Ultra



Cut rose varieties in photo: 'Freedom' and 'Gotcha'

CONCLUSIONS:

The quality of flowers treated with FloraLife® Shield Ultra was significantly better than control flowers. On average, FloraLife® Shield Ultra increased vase life by 139%, flower opening by 32%, and color vibrancy by 106%.

*Product availability depends upon geographical region.