



IMPROVED COLOR RETENTION OF HAIR DYES WITH FLORAESTERS K-20W® JOJOBA AND FLORAESTERS K-100® JOJOBA

CS 15-076



Floraesters K-20W Jojoba in a Shampoo and Floraesters K-100 Jojoba in a Conditioner Improves Color Retention of Hair Dyes



Objective: To evaluate Floraesters K-20W Jojoba and Floraesters K-100 Jojoba for their potential to improve hair dye color retention.

Method: Wool swatches were dyed with commercial red or brown permanent hair dyes. Swatches underwent 8 treatment cycles (wash / rinse / condition / rinse) using shampoos and conditioners with or without 2.5% Floraesters K-20W Jojoba and 1% Floraesters K-100 Jojoba, respectively. Change in color (ΔE) from pre-treatment was measured after every 2 treatment cycles.

Results: Wool swatches dyed with commercial red or brown permanent *hair dyes retained up to 19% more color* (test article D) when a shampoo containing 2.5% Floraesters K-20W Jojoba and a conditioner containing 1% Floraesters K-100 Jojoba were compared to a shampoo and conditioner without Floraesters K-20W Jojoba and Floraesters K-100 Jojoba, respectively.

Vehicle Shampoo: Water (q.s.), Disodium Laureth Sulfosuccinate (12.0%), Decyl Glucoside (8.0%), Sodium Lauroyl Sarcosinate (8.0%), Cocamidopropyl Betaine (8.0%), Acrylates Crosspolymer-4 (3.0%), Methyl Glucose Caprate / Caprylate / Oleate (and) Propanediol (2.0%), Sodium Cocoyl Isethionate (2.0%), Glycol Distearate (1.5%), Phenoxyethanol (and) Caprylyl Glycol (and) Ethylhexylglycerin (and) Hexylene Glycol (0.8%), Guar Hydroxypropyltrimonium Chloride (0.7%), Fragrance (0.7%), Aminomethyl Propanol (0.4%), and Disodium EDTA (0.1%).

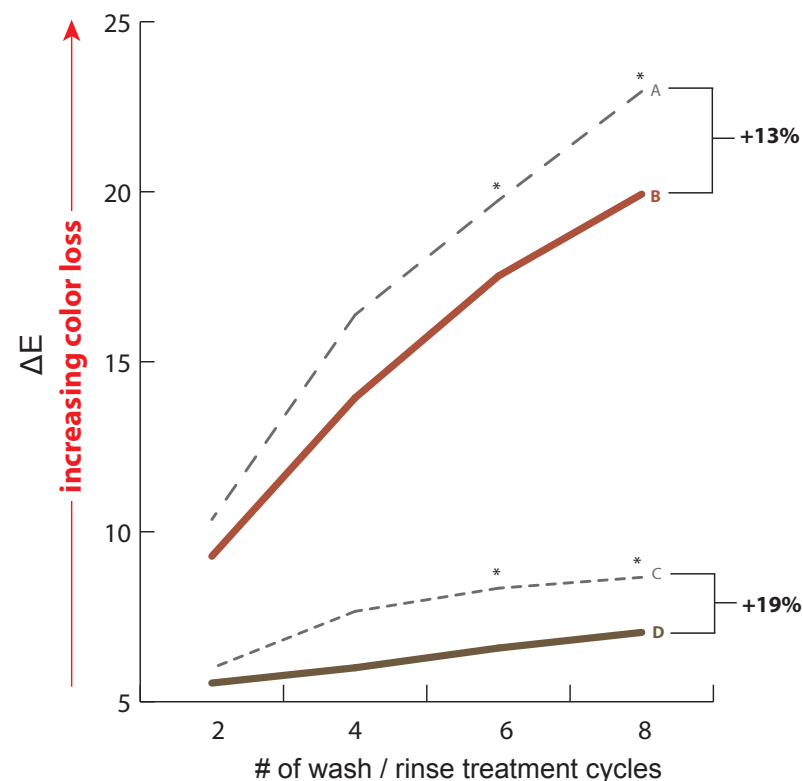
Vehicle Conditioner: Water (q.s.), Glyceryl Stearate (and) Cetearyl Alcohol (and) Sodium Stearoyl Lactylate (6.0%), Cetyl Alcohol (2.0%), Propanediol (1.0%), Polyglyceryl-2 Stearate (1.0%), Ethylhexyl Methoxycinnamate (and) BHT (1.0%), Theobroma Grandiflorum Seed Butter (and) Tocopherol (1.0%), Prunus Amygdalus Dulcis (Sweet Almond) Oil (1.0%), Ethyl Macadamiate (1.0%), Phenoxyethanol (and) Caprylyl Glycol (and) Ethylhexylglycerin (and) Hexylene Glycol (0.8%), Fragrance (0.5%), Tocopheryl Acetate (0.5%), Cetyl Hydroxyethyl Cellulose (0.1%), and Disodium EDTA (0.1%).

Floratech Ingredients: Floraesters K-20W Jojoba and Floraesters K-100 Jojoba

The clinical study of Floratech® test formulation (CTL_14-057) was conducted on 2" x 2" worsted gabardine wool swatches (n=3 per test article) obtained from Test Fabrics, Inc (West Pittston, PA). The hair dyes used were Vidal Sassoon®, Pro Series London Lux (6RR Runway Red) (Proctor & Gamble Company, Cincinnati, OH) and Garnier Fructis®, HerbaShine® Color Crème (500 Medium Brown) (L'Oréal, Paris, France). Wool swatches were dyed according to package instructions. The study was blinded, and carried out under controlled temperature and humidity conditions. A wash / rinse / condition / rinse cycle consisted of immersing the wool swatch in 200ml of the test article shampoo solution (2% volume/volume), stirring (for 1 minute using a magnetic stir bar), rinsing (i.e. immersing the wool swatch in 200ml of water and stirring), immersing the wool swatch in 200ml of the test article conditioner solution (2% volume/volume), stirring, and rinsing. Color intensity for each swatch was measured using a Colorimeter CL 400 (Courage + Khazaka, Köln, Germany) at baseline prior to treatment, and after each set of two wash / rinse / condition / rinse treatment cycles. Color loss was calculated from $L^*a^*b^*$ values using the following equation: $\Delta E = \sqrt{[(L^*_2 - L^*_1)^2 + (a^*_2 - a^*_1)^2 + (b^*_2 - b^*_1)^2]}$. (Clinical Study 14-057C and 14-057G reports available upon request.)

* Indicates statistical significance (p<0.05) between test articles.

Color Retention



- A - vehicle shampoo / vehicle conditioner (red)
- B - vehicle shampoo + 2.5% K-20W / vehicle conditioner + 1% K-100 (red)
- C - vehicle shampoo / vehicle conditioner (brown)
- D - vehicle shampoo + 2.5% K-20W / vehicle conditioner + 1% K-100 (brown)