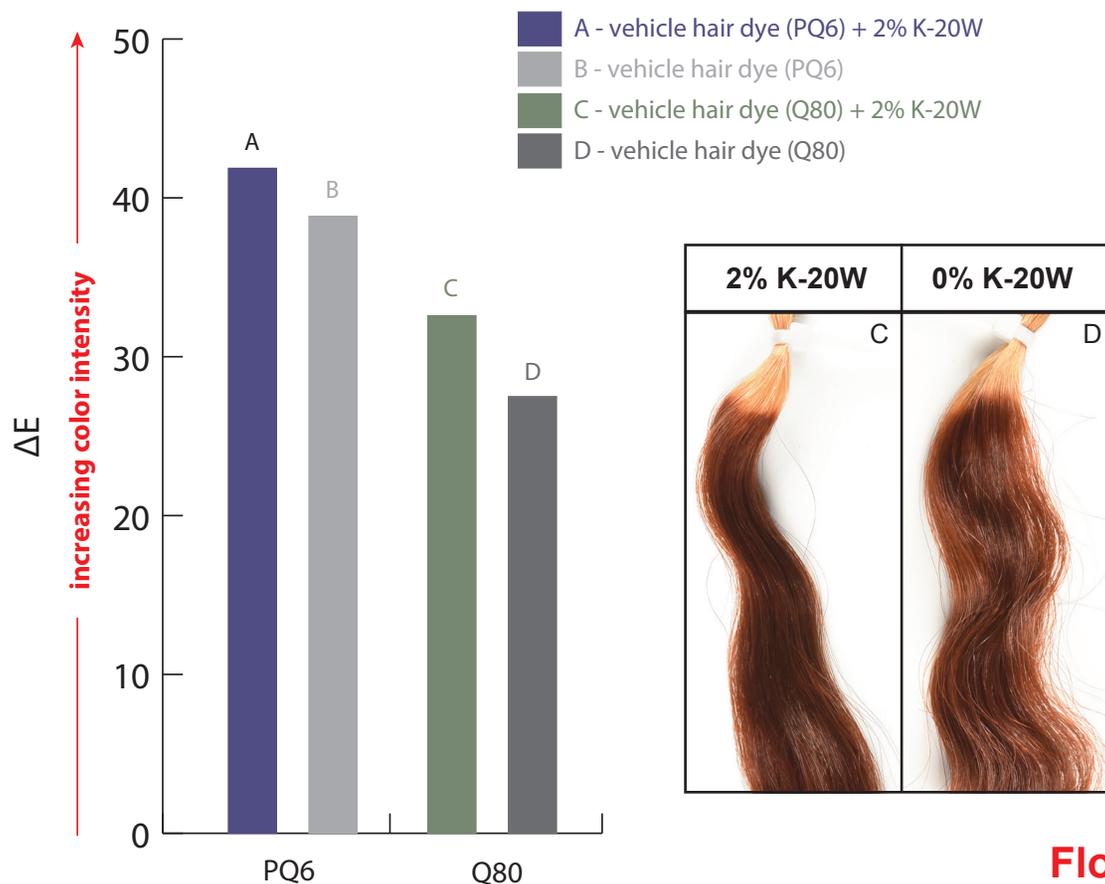


Floraesters® K-20W Jojoba Increased Dye Uptake in a Semi-Permanent Hair Dye

Hair Color Deposition



Objective:

To evaluate Floraesters K-20W Jojoba in a semi-permanent hair dye for its potential to increase the initial amount of color deposited on hair.

Method:

Hair tresses were dyed with brown semi-permanent hair dyes with and without 2% Floraesters K-20W Jojoba. The change in color (ΔE) of the hair tresses was measured immediately after dyeing.

Results:

Hair tresses dyed with semi-permanent hair dye containing 2% Floraesters K-20W Jojoba **achieved up to 19% greater color intensity** in 20 minutes.

A = vehicle hair dye + Polyquaternium-6 + 2% Floraesters K-20W Jojoba / B = vehicle hair dye + Polyquaternium-6 / C = vehicle hair dye + Quaternium-80 + 2% Floraesters K-20W Jojoba / D = vehicle hair dye + Quaternium-80

Vehicle Hair Dye (%wt/wt): Deionized Water (q.s.), Cetyl Alcohol (and) Oleyl Alcohol (and) Cetearyl Alcohol (and) Stearic Acid (15.0%), Laureth-7 (10.0%), Cetearth-20 (4.0%), Polyquaternium-6 or Quaternium-80 (4.0%), Mineral Oil (2.0%), Propylene Glycol (2.0%), Sodium Cetearyl Sulfate (1.0%), Citric Acid (and) Water (0.35%), Basic Orange 31 (0.25%), Basic Yellow 87 (0.18%), Basic Blue 124 (0.05%), and Basic Red 51 (0.03%).

Floratech Ingredient: Floraesters K-20W Jojoba

The ex vivo study of Floratech® test formulation (CTL_15-062) was conducted on naturally curly, dark brown, six inch long hair tresses (DeMeo Brothers Inc.) that were double-bleached and then washed with sodium lauryl sulfate prior to use in the study (n=5 tresses per test article), then air-dried overnight. Treatment consisted of one application of 1 ml of the dye test article per 1.5 g of hair, with 20 minutes of residence time (with heat). The study was blinded, and carried out under controlled temperature and humidity conditions. Color intensity for each tress was measured using a Colorimeter CL 400 (Courage + Khazaka) at baseline prior to dye exposure and after 20 minutes of dye residence time. Color change was calculated from L*a*b* values using the following equation: $\Delta E = \sqrt{[(L^*_2 - L^*_1)^2 + (a^*_2 - a^*_1)^2 + (b^*_2 - b^*_1)^2]}$. The inclusion of Floraesters K-20W Jojoba resulted in statistically significantly ($p < 0.05$) more color immediately after dyeing compared to the vehicle. (Clinical Study 15-062 - Phase II - Brown report available upon request.)