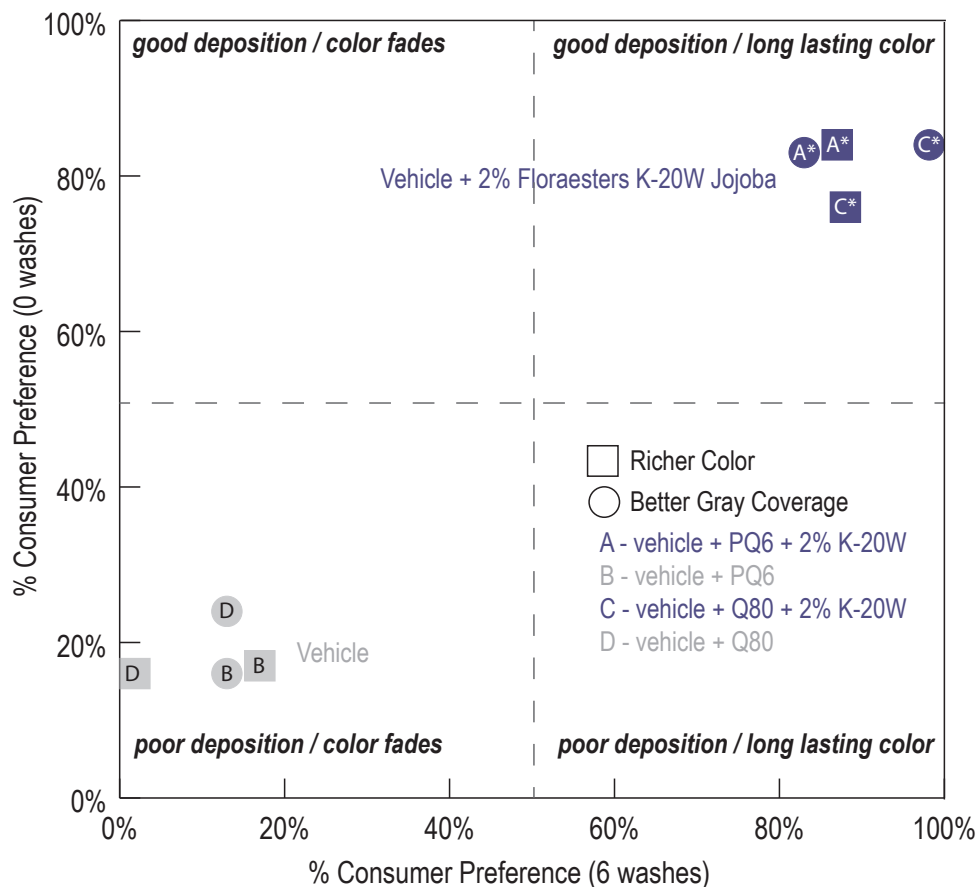




## Floraesters® K-20W Jojoba Improved Gray Coverage in a Semi-Permanent Hair Dye<sup>1</sup>

### Consumer Perception



Statistical (\*) significance was apparent where indicated ( $p < 0.05$ ).

### Objective:

To evaluate Floraesters K-20W Jojoba in a semi-permanent hair dye for its potential to provide better gray coverage initially (0 washes) and post-washing.

### Method:

Hair tresses with 50% gray were dyed with brown semi-permanent hair dyes with and without 2% Floraesters K-20W Jojoba. Female consumers evaluated hair tresses immediately after dyeing and after 6 wash cycles.

### Results:

Both initially and after 6 washes, **76% or more of consumers preferred the hair dye with Floraesters K-20W Jojoba for gray coverage and richness of color** compared to the hair dye without.

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%), Cetareth-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, 50% dark brown / 50% gray, six inch long hair tresses (DeMeo Brothers Inc.) that were washed with sodium lauryl sulfate prior to use in the study (n=2 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). A wash cycle consisted of a 30 second rinse, a 30 second wash (i.e. rubbed) with shampoo, and another 30 second rinse. The consumers consisted of 25 healthy female subjects, ranging from 19 to 65 years of age (mean age = 41). The study was double-blind and randomized. (Clinical Study 15-062 - Phase II - Gray report available upon request.)

1. The preference data does not include subjects that indicated no preference.