

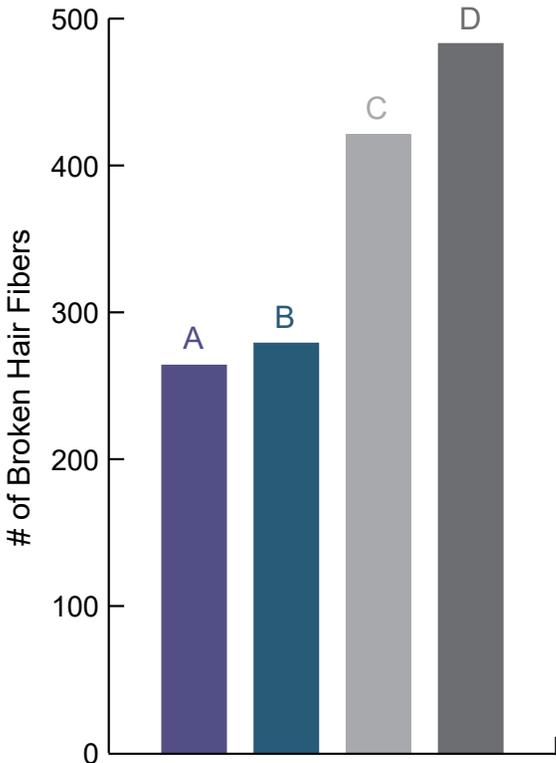
HEAT PROTECTION USING FLORAESTERS® IPJ AS A SILICONE ALTERNATIVE IN A LEAVE-IN HAIR CREAM

CS 21-146



Floraesters IPJ Provided Heat Protection in a Leave-In Hair Cream

Broken Hair Fibers



Objective:

To evaluate Floraesters IPJ for its potential to prevent heat-damaged hair from breakage (*i.e.* heat protection) when used in a leave-in hair cream.

Method:

Leave-in hair creams containing either 5% Floraesters IPJ or 5% phenyl trimethicone were applied to hair tresses, followed by heat exposure. Breakage was determined after 1000 controlled comb strokes.

Results:

The leave-in hair cream containing Floraesters IPJ **performed similarly** to phenyl trimethicone, and **45% better** than untreated hair.

- A - 5% Floraesters IPJ
- B - 5% phenyl trimethicone
- C - vehicle
- D - untreated (control)



Floratech Ingredient: Floraesters IPJ

A = vehicle hair cream + 5% Floraesters IPJ / B = vehicle hair cream + 5% phenyl trimethicone
 Vehicle Hair Cream (%wt/wt): Water (q.s.), Hydrogenated Sunflower Seed Oil Polyglyceryl-3 Esters (and) Hydrogenated Sunflower Seed Oil Glyceryl Esters (and) Cetearyl Alcohol (and) Sodium Stearoyl Lactylate (3.00%), Phenoxyethanol (and) Ethylhexylglycerin (0.90%), Hydrolyzed Soy Protein (0.65%), Carbomer (0.25%), Aminomethyl Propanol (0.16%), and Disodium EDTA (0.10%).

The *ex vivo* study of Floratech® test formulation (CTL_20-081) was conducted (n=6 tresses per test article) on naturally curly, brown, five inch long hair tresses (International Hair Importers & Products). Tresses were double bleached and washed with sodium lauryl sulfate prior to use in the study. Treatment consisted of damp hair tresses being treated with one application of the leave-in hair cream test article (1 ml per 1.5 g of hair), blow-drying, repeated flat ironing at 450°F (232°C, 100 passes), and repeated combing (1000 controlled comb strokes). Broken hair fibers were collected and visually counted after repeated combing. The study was blinded and carried out under controlled temperature and humidity conditions. The test article with Floraesters IPJ resulted in statistically significant (p<0.05) fewer broken fibers compared to the vehicle and the control (untreated), and performed similarly to the test article with phenyl trimethicone. (Clinical Study 20-081 - Phase III report available upon request.)