Hair Curl Retention

Measurement In Vitro
The test does not require the use of human volunteers

Supportable Claims
• Performance of hair fixatives.
• Strong hold.
• Holding ability over time.
• Application to wet or dry hair.

Principle
Hair swatches are treated with the test product. Behaviour of the prepared and conditioned swatches is observed under controlled temperature and humidity.

Steps of the Test
Tresses are rinsed and dried. A quantified amount of product is applied to each tress (in duplicate). The sample is worked thoroughly through the hair, which may be wet or dry as required.

Each tress is separately and tightly wrapped around a hair curler, so as to provide a spiral curl and clipped. The prepared curls are then placed in a calibrated humidity cabinet for conditioning. The humidity is set at 75% RH and the temperature at 25°C. It can be altered if necessary to suit specific claims.

The clips are released and immediate drop length can then be measured. At various time points, typically 2, 4 and 7 hrs, the length of the hair tresses are remeasured in order to determine product performance over time.

Reporting
3.1 The readings are converted to percent curl retention by using the following calculation:
% Curl Retention = (Length of Uncurled Hair Tress - Reading at time point)/(Length of uncurled hair Tress - initial reading
100% = fully retained curl
0% = fully extended.
% Curl extension = 100 - % Curl Retention.

Results can be ranked. Initial curl length can be separately assessed.

Product Types in the Market
Personal care hair curl retainers sold at retail or in the professional market may be based on waxes or resins, or a combination of both.

Additional claims made include texturing, matt or gloss appearance, non-greasy, non-hardening, easy wash out, non-sticky

References
1. Set Relaxation of human hair

2. Polymer Properties Influencing Curl Retention at High Humidity

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