

Natural eyebrow and hair fixative

by Jean-Francois Malaval

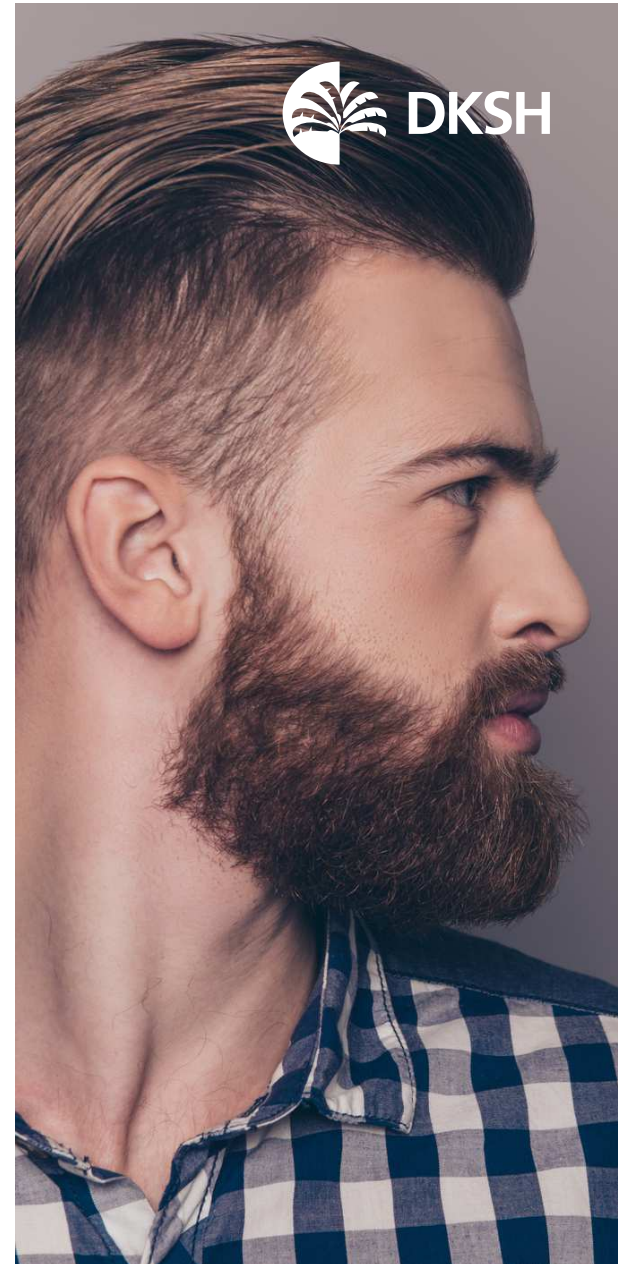
Manager, Technical Services and Innovation Personal Care Industry

Tuesday 29th June 2021

Thursday 8th July 2021

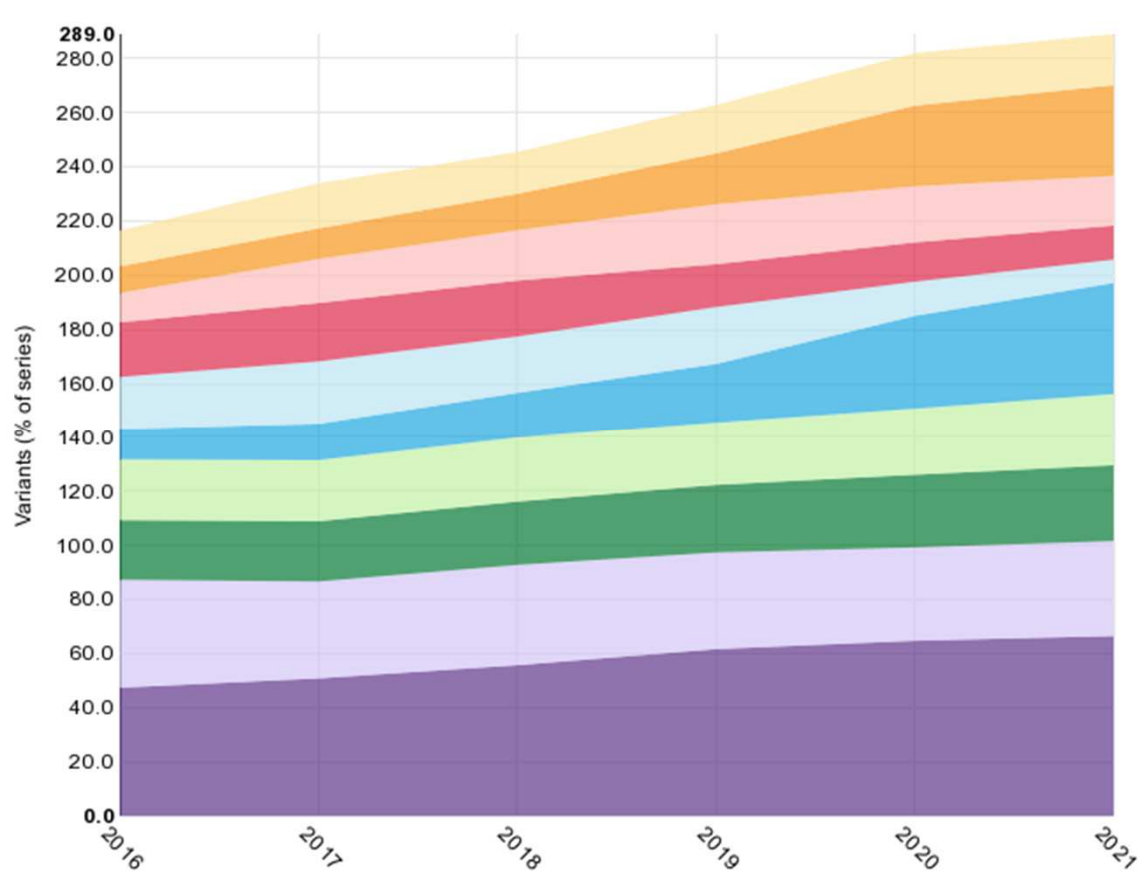
Agenda

1. Hair Care & Styling market overview
2. Formulation concepts and key ingredients
3. Q&A



Hair Care & Styling market overview

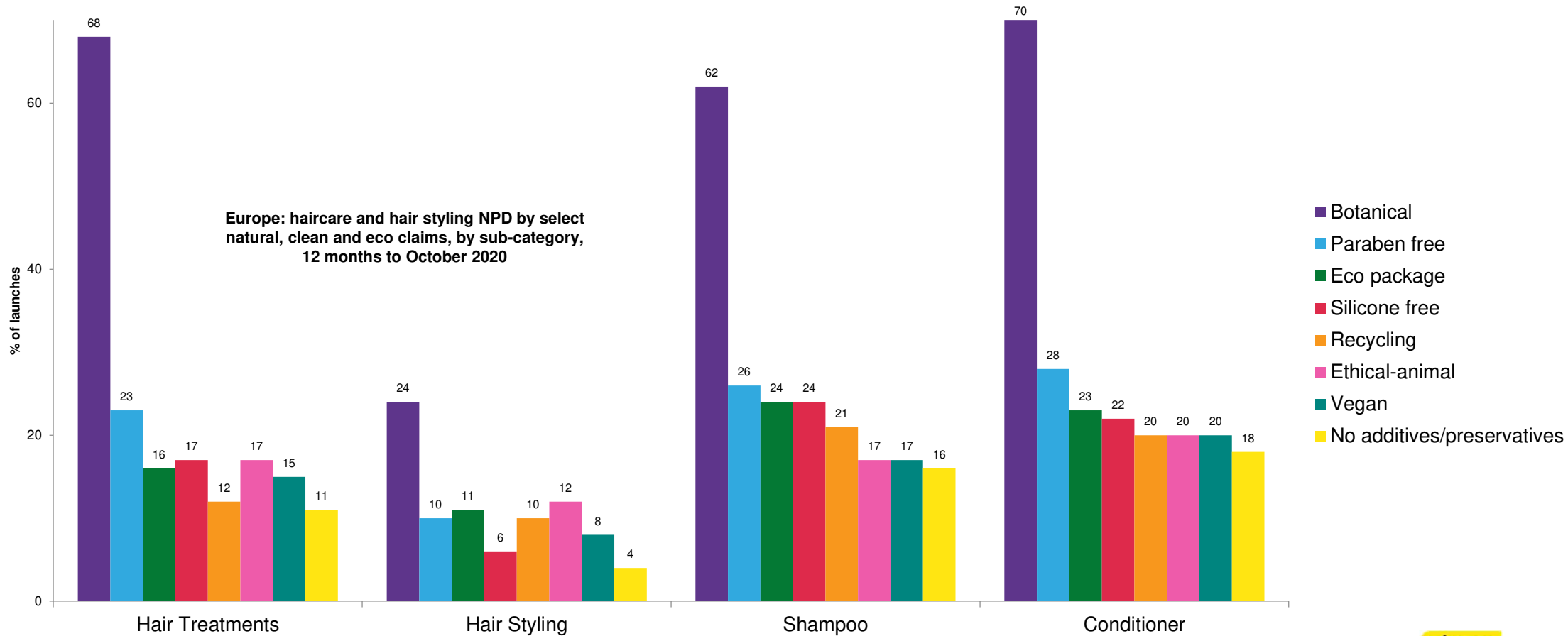
Hair care market analysis



- Botanical/Herbal
- Brightening / Illumina...
- Moisturising / Hydrat...
- Damaged Hair
- Ethical - Environmen...
- Paraben Free
- Long-Lasting
- Silicone Free
- Ethical - Recycling
- Dermatologically Te...

- where **Region** matches *Europe*
- and **Category** matches *Hair Products*
- and **Claims** matches *All Natural Product as the claim*

Europe: continue to make inroads in the natural, clean and eco space



Source: [Mintel GNPD](#)

Natural, 'clean' and eco styling innovation falls short (vs haircare)



in the UK

51%

of female hair styling product users think it's most important that their hair styling routine is natural

Natural, 'clean' and eco claims may be **fast-growing** in the European hair styling market, but compared to haircare (eg shampoo, conditioner and treatments) there is still **a long way to go**.

Boding well for the segment is consumer interest. The COVID-19 crisis is also likely to have spurred 'clean' and eco movements further given **concerns over pandemic waste and the big emphasis placed on safety and protection**.

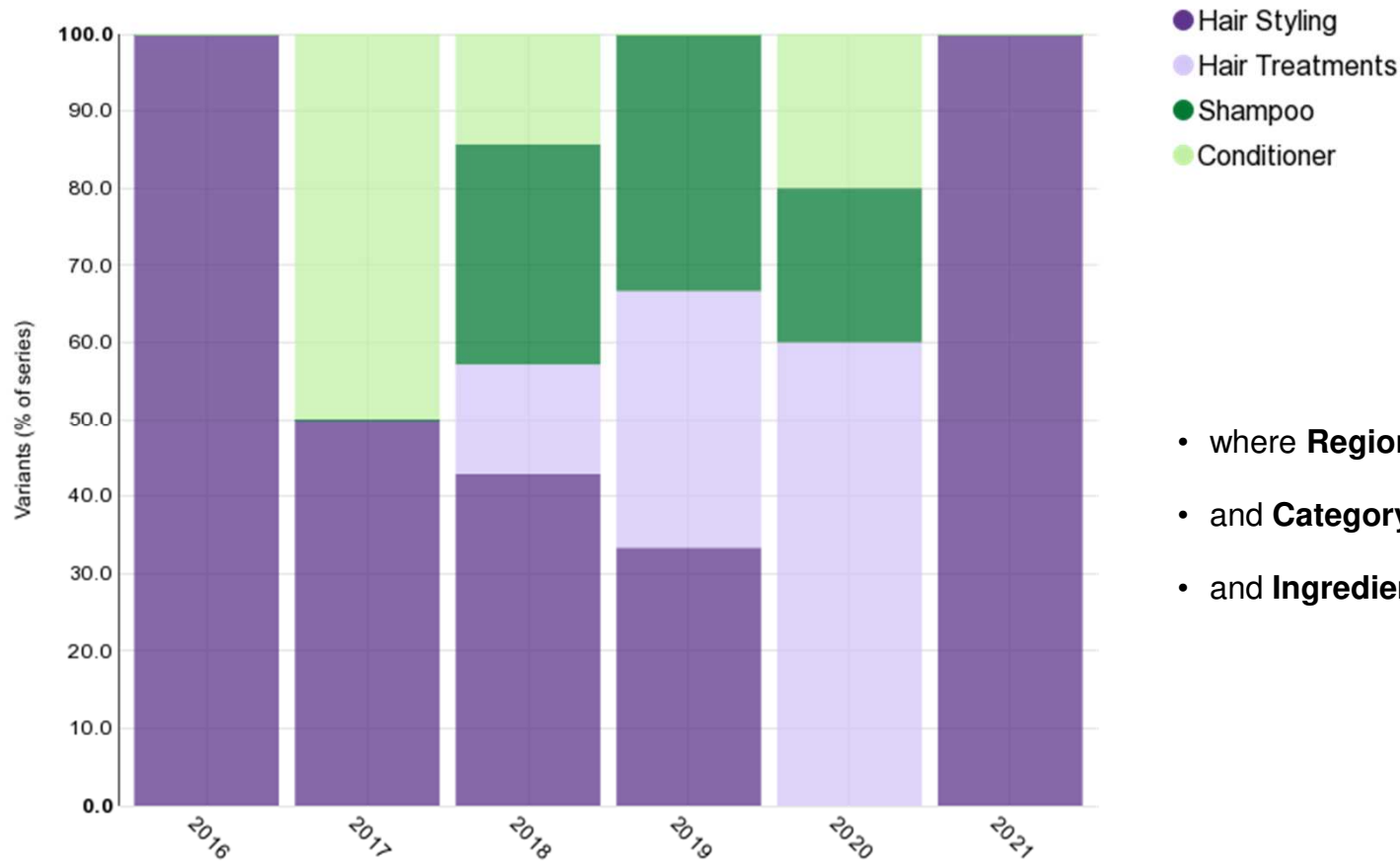
'**Clean Beauty**', **Vegan**, free from Microplastics (sometimes used in products to improve a formula's thickness or spreadability) are the hottest trends.

Base: UK: 741 female internet users aged 16+ who use styling products
Source: Lightspeed/Mintel



Read on [mintel.com](https://www.mintel.com)

Hair product Pullulan market analysis

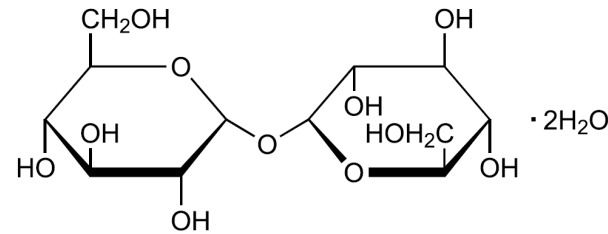


- where **Region** matches *Europe*
- and **Category** matches *Hair Products*
- and **Ingredient Search** matches *Pullulan as the Ingredients*

Formulation concepts and key ingredients

Trehalose at a glance

- Water soluble polysaccharide
 - Environmentally friendly polymer material
 - Easily biodegradable
 - Produced from starch by fermentation
 - 100% Natural Index according to ISO 16128
 - COSMOS approved
-
- ✓ Powder form
 - ✓ Freely soluble in water, does not form gels
 - ✓ pH stable from 2 to 11
 - ✓ Salt and heat resistant
 - ✓ Unique moisturizing
 - ✓ Natural protector skin and **hair**
 - ✓ Increases the amount of retained water in Keratin



Trehalose heat styling benefits @ high humidity



Initial Control

Control after 3H

Trehalose after 3H

Initial Trehalose 2%



After 3H @30°C, 80% RH



This striking longevity benefit could only be obtained with Trehalose & heat i.e. switches straightened with hot irons w/o Trehalose treatment didn't show any anti humidity benefit & those straightened with hot irons with **Trehalose has very good anti humidity properties.**

Anti-flaking performance evaluation



In this study, we compare and evaluate styling performances on hair tresses with 2 hair styling gels (PVP @2%) in high humidity conditions (90% RH).

Results

0 hrs



2 hrs



4 hrs



Anti-flaking performance evaluation



Conclusion

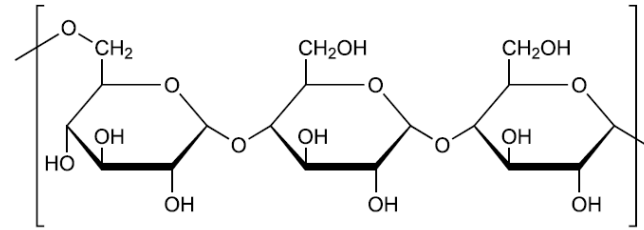
after application on hair and making it in curls, with Trehalose:

- ✓ Any residues: **flacking reduction effect**
- ✓ Curl retention is extended at high humidity
- ✓ Softer and **smoother**
- ✓ Hair is more rigid

Trehalose avoid PVP flaking

Pullulan at a glance

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- ✓ Powder form
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 - ✓ pH stable from 2 to 11
 - ✓ Salt and heat resistant
 - ✓ Film-forming ability and unique lubricity
 - ✓ **Binding** properties after drying



Natural hair styling

Description

Transparent liquid to give medium fixative at your hair.

Key points

- ✓ Hard fixative properties and **flake-free**
- ✓ Quick dry
- ✓ NI = 1; NOI = 1

Key ingredients

PULLULAN:

- ✓ Unique polysaccharide, which can provide smoother texture
- ✓ Film forming
- ✓ Improves adhesion

TREHALOSE:

- ✓ Polysaccharide of glucose
- ✓ High capacity of water retention
- ✓ Trehalose regulate moisture giving longer-lasting benefits to styling
- ✓ Synergy with Pullulan, preventing no residue on the hair



Ingredient		INCI	Supplier	
A1	DEIONIZED WATER	AQUA	-	74,00
A2	PULLULAN	PULLULAN	NAGASE-HAYASHIBARA / DKSH	6,00
A3	ZEMEA PROPANEDIOL	PROPANEDIOL	DUPONT TATE&LYLE / DKSH	3,00
A4	TREHALOSE	TREHALOSE	NAGASE-HAYASHIBARA / DKSH	2,00
A5	ALCOHOL DENAT.	ALCOHOL DENAT.	-	15,00

Trehalose is efficient to reduce flacking for natural film former like Pullulan

Eyebrow styling gel

Description

Transparent gel for eyebrow with the combination of Pullulan and Trehalose.

Key points

- ✓ Welcare ATBS-C allows an easy application of the product
- ✓ Pullulan and Trehalose combination give a good dry effect, flake-free
- ✓ **NI=0,96; NOI= 0.98**

Key ingredients

Pullulan:

- ✓ Give a good fixing property for water gel
- ✓ Easier application because of a important dry effect
- ✓ Easy to spread on the eyebrow
- ✓ Unique polysaccharide, which can provide smoother texture
- ✓ Film forming
- ✓ Improves adhesion

TREHALOSE:

- ✓ Polysaccharide of glucose
- ✓ High capacity of water retention
- ✓ Trehalose regulate moisture giving longer-lasting benefits to styling
- ✓ Synergy with Pullulan, preventing no residue on the hair



Ingredient		INCI	Supplier	
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A2	PULLULAN	PULLULAN	NAGASE-HAYASHIBARA / DKSH	6,00
A3	TREHALOSE	TREHALOSE	NAGASE-HAYASHIBARA / DKSH	2,00
A4	WEYLCARE ATBS-C	AMMONIUM POLYACRYLOYLDIMETHYL TAURATE	WEYLCHEM / DKSH	0,90
A5	1-3 BUTYLENE GLYCOL	BUTYLENE GLYCOL	DAICEL	2,00
B1	EUXYL K 900	BENZYL ALCOHOL (and) ETHYLHEXYLGLYCERIN (and) TOCOPHEROL	SCHULKE/DKSH	0,90

Q&A



Thank you for your attention

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