

Personal Care

FLOCARE PQ37 range:
a perfect solution
for minimalist
formulation for
maximum results in

Minimalist formulation

A multi-beneficial market trend



Less is more. The minimalist concept is to obtain efficient formulas with the use of minimal amount of ingredients.

In addition to improving sustainability, it also offers more transparency and purity to consumers.

Sustainability | Purity | Efficiency

FLOCARE™ PQ37 Range

Perfect solution for minimalist formulation



Sustainability

Cold process
No neutralization
No premixing or special storage



Purity

Preservative free
Transparent formula possible
Short ingredient list



Efficiency

Multifunctional
Efficient with low dosage
Compatible with wide pH range

FLOCARE™ PQ37 range is based on polyquaternium 37, an inverse emulsion in liquid or powder form.

A multifunctional **thickener & conditioner**, easy to integrate into **hair conditioner / mask / treatment** formulations, an ideal solution for minimalist trend.

Viscosity development as quick as lightning



No need of...

- Heating
- Sophisticated equipment
- pH adjustment (pre-neutralized)

Easy to...

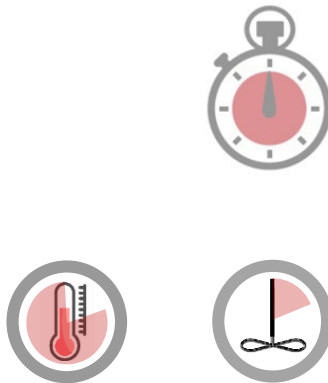
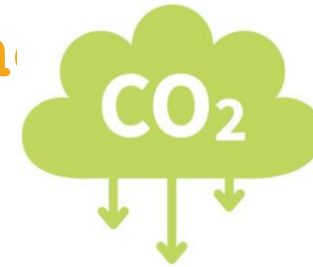
- Disperse in water
- Generate viscosity quickly
- Control formulation process

Time & energy saving for sustainability

Less CO₂ emissions from processing better yield

Hot process emulsion
with conventional emulsifying system

Cold process emulsion
with FLOCARE™ inverse emulsion



70% Time saving

96% Energy saving
(Equivalent CO₂ emissions)

Method: measure of time and energy consumption with a power analyzer (Chauvin Arnoux)

Formula: - Cold: 2% FLOCARE™ ET/PSD, 9% emollients, qs antioxidant, qs preservative, qs 100% water

- Hot: 0,5% Xanthan Gum, 2% Cetyl alcohol, 0,25% Cetearyl Alcohol, 2,5% emulsifying agents, 9% emollients, qs antioxidant, qs preservative, qsp 100% water

Preservative free

A new level of purity

FLOCARE™ PQ 37 Range is an inverse emulsion, available in **powder** and **liquid** form (dispersion of polymer in oil). Both are **self-preserved** system.

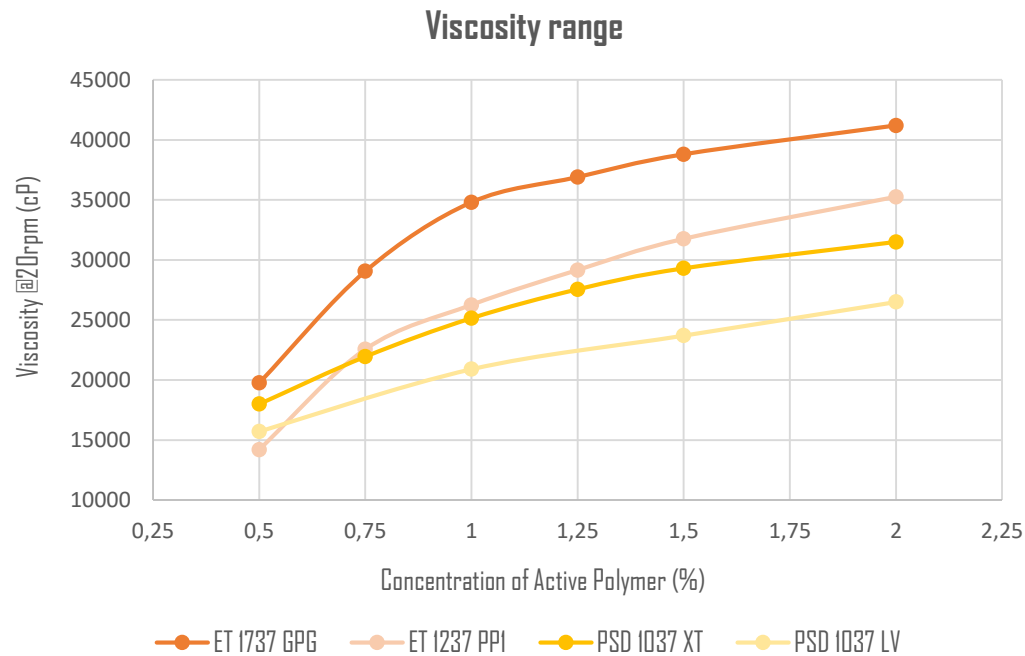


Functional benefits

- Thickening
- Optimum pH range to formulate
- Emulsifying
- Conditioning
- Straightening
- Sensory



Large viscosity range available



- High thickening efficiency: low dosage is sufficient
- Various viscosity possibilities with different grades

Product reference	INCI name	% Active
-------------------	-----------	----------

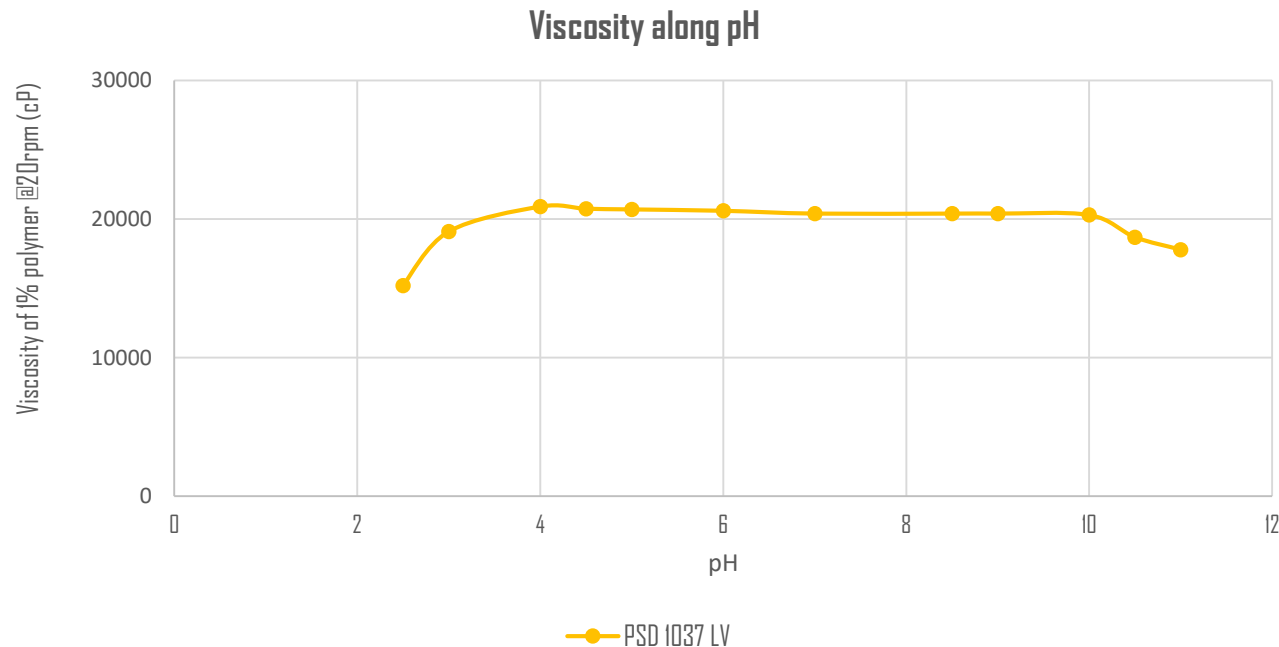
LIQUID DISPERSION POLYMERS - CATIONIC

FLOCARE™ ET 1237 PPI	Polyquaternium-37 (and) Mineral Oil (and) PPG-1 Trideceth-6	48-52
FLOCARE™ ET 1737 GPG	Polyquaternium-37 (and) Propylene Glycol Dicaprylate/Dicaprate (and) PPG-1 Trideceth-6	48-52

POWDER POLYMERS (spray dried emulsion) - CATIONIC

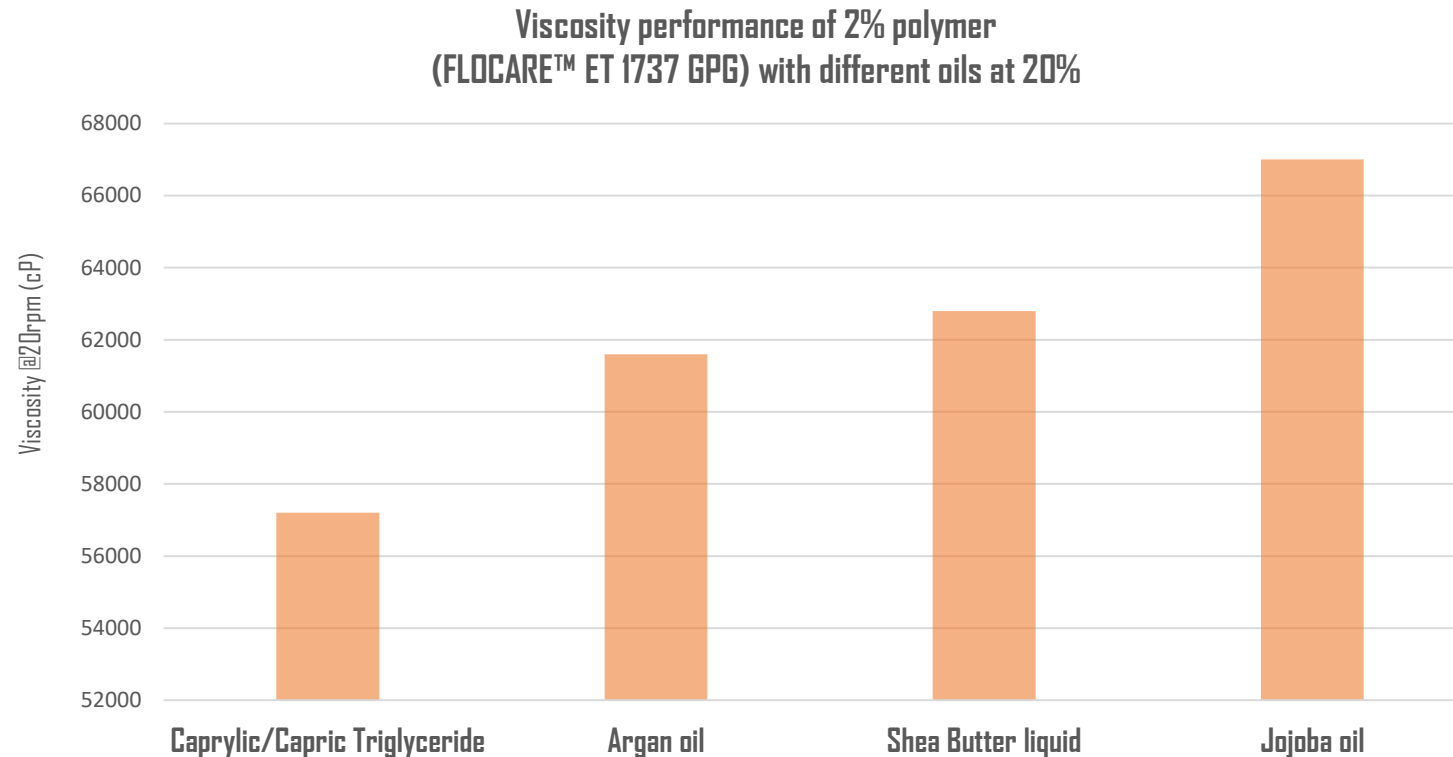
FLOCARE™ PSD 1037 LV	Polyquaternium-37	> 85
FLOCARE™ PSD 1037 XT	Polyquaternium-37	> 85

Large pH range compatible



Stable over a large pH range (3-10), FLOCARE™ PQ37 range enables various formulation types from damaged hair conditioning (low pH) to coloring cream (high pH).

Powerful self-emulsifier

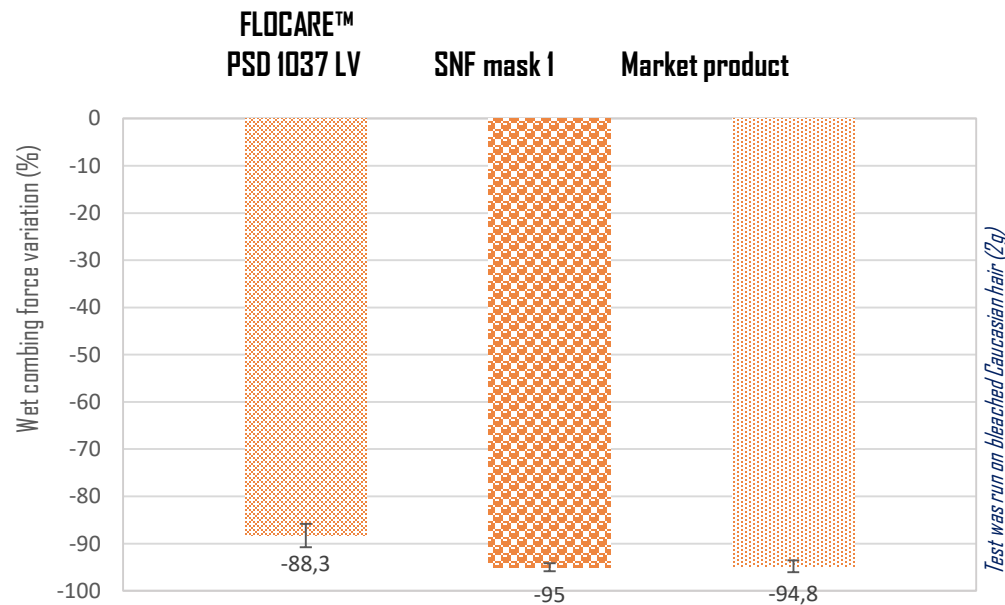


FLOCARE™ PQ37 in liquid form delivers stable emulsion up to **20%** of oil,
without additional surfactant.

Outstanding conditioning benefit on caucasian hair

Wet combing benefit comparison of 3 masks (Dia-Stron)

✓ The bigger wet combing force variation is the best



Ingredient	Formula based on FLOCARE™ PSD 1037 LV	Formula based on FLOCARE™ PSD 1037 LV + FLOCARE™ C139 PF (SNF mask 1)	Market product
Water	Qsp 100	Qsp 100	12 ingredients (fragrance excluded)
Emollient	3%	3%	
Preservative	0,80%	0,80%	
FLOCARE™ PSD 1037 LV	2,11%	2,11%	
FLOCARE™ C139 PF	-	3%	

- FLOCARE™ PQ37 improves wet combing significantly
- FLOCARE™ PQ39 boosts the conditioning benefit

SNF
PERSONAL CARE

5 ingredients = **12** ingredients



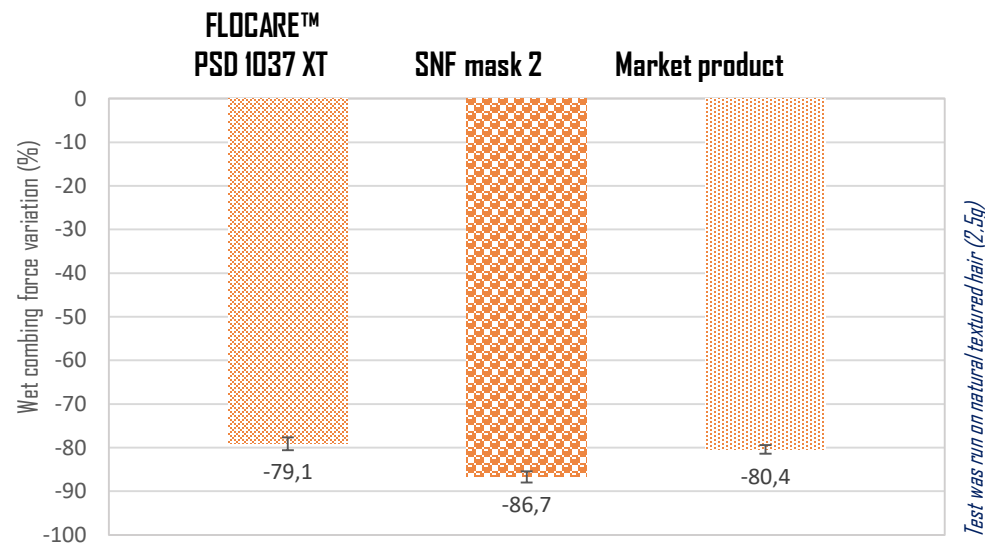
With much less ingredients, SNF mask 1 reaches the same performance as the reference market product.

Outstanding conditioning benefit on textured hair

1. WET COMBING (internal test)

Wet combing benefit comparison of 3 masks (Dia-Stron)

✓ The bigger wet combing force variation, the better



Ingredient	Formula based on FLOCARE™ PSD 1037 XT	Formula based on FLOCARE™ PSD 1037 XT + FLOCARE™ C139 PF (SNF mask 2)	Market product
Water	Qsp 100	Qsp 100	15 ingredients
Emollient	3%	3%	
Preservative	0,80%	0,80%	
FLOCARE™ PSD 1037 XT	1,97%	1,97%	
FLOCARE™ C139 PF	-	3%	

- FLOCARE™ PQ37 improves wet combing significantly
- FLOCARE™ PQ39 boosts the conditioning benefit

SNF
PERSONAL CARE

5 ingredients = **15** ingredients



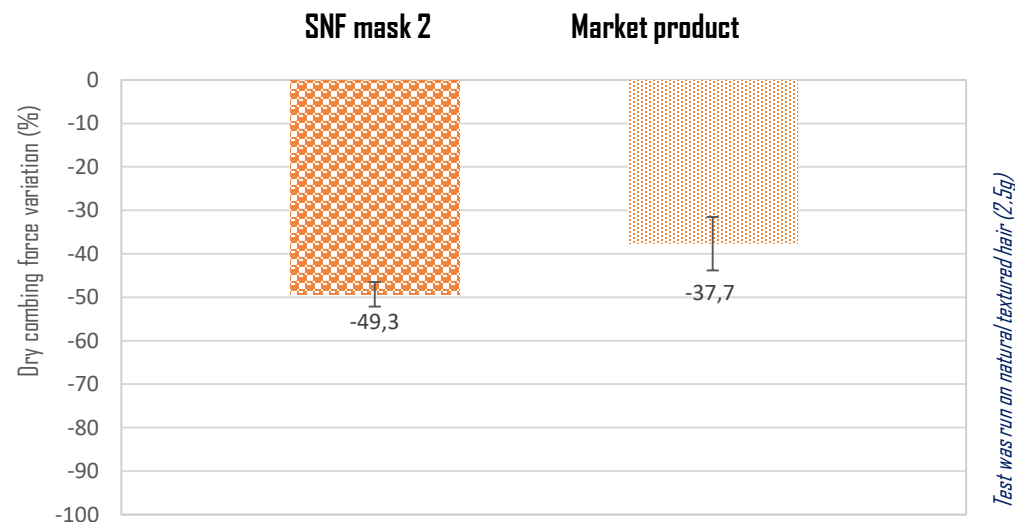
Even on textured hair and with 3 times less ingredients, SNF mask reaches better performance than the reference market product.


Outstanding conditioning benefit on textured hair

2. DRY COMBING

Dry combing benefit comparison of 2 masks (Dia-Stron)

✓ The bigger dry combing force variation is the best



Ingredient	Formula based on FLOCARE™ PSD 1037 XT + FLOCARE™ C139 PF (SNF mask 2)	Market product
Water	Qsp 100	15 ingredients 
Emollient	3%	
Preservative	0,80%	
FLOCARE™ PSD 1037 XT	1,97%	
FLOCARE™ C139 PF	3%	

- Results in wet combing are confirmed in dry combing.
- Combination of FLOCARE™ PQ37 with FLOCARE™ PQ39 improves dry combing significantly.

On textured hair, the association of Flocare™ PSD 1037 XT & Flocare™ C 139 PF can match the performance of the reference market product based on BTMS and CTAC in both wet and dry combing

Straightening benefit



Defining cream

NAME	INCI	FUNCTION	As is %
Water	Aqua		92.30
Glycerin	Glycerin	Humectant	2.0
FLOCARE™ PSD 1037	Polyquaternium-37	Rheology modifier Conditioner	2.0
JKahl Jelly 7038 Cocajoba oil	Cocos Nucifera Oil, Olea Europaea Fruit Oil, Rhus Verniciflua Peel Cera, Helianthus Annuus Seed Cera	Emollient	3.0
Vitamin E	Tocopheryl Acetate	Anti-oxdant	0.20
FocusGuard PE 9010	Ethylhexylglycerin /Phenoxyethanol	Preservative	0.5

*Volume reduction @80% HR and 25°C
Natural textured hair (Walker 3)
Application of 15% by weight of product/tress
Hair dryer and flat iron (5 times 230°C)*

Straightening benefit

Defining cream

NAME	INCI	FUNCTION	As is %
Water	Aqua		92.3
Glycerin	Glycerin	Humectant	2.0
FLOCARE™ PSD 1037	Polyquaternium-37	Rheology modifier Conditioner	2.0
JKahl Jelly 7038 Cocoojoba oil	Cocos Nucifera Oil, Olea Europaea Fruit Oil, Rhus Verniciflua Peel Cera, Helianthus Annuus Seed Cera	Emollient	3.0
Vitamin E	Tocopheryl Acetate	Anti-oxydant	0.20
FocusGuard PE 9010	Ethylhexylglycerin /Phenoxyethanol	Preservative	0.5

FLOCARE™ PSD 1037 **performs better** than the professional benchmarks containing silicones

Formulation guidelines

Hair blush

TRANSFORMING RETOUCH (HC 005)

Name	INCI	Function	%
Soft Talc	Talc	Vehicle	53.20
Magnesium Stearate	Magnesium Stearate	Treated talc	3.50
FLOCARE™ PSD 1037 LV	Polyquaternium-37	Conditioner	10.00
ACT96-TRI-77891	CI 77891 (and) Disodium Stearoyl Glutamate (and) Aluminum Dimyristate (and) Triethoxycaprylylsilane	Treated pigment	4.00
ACT96-TRI-77492	CI 77492 (and) Disodium Stearoyl Glutamate (and) Aluminum Dimyristate (and) Triethoxycaprylylsilane	Treated pigment	3.90
ACT96-TRI-77491	CI 77491 (and) Disodium Stearoyl Glutamate (and) Aluminum Dimyristate (and) Triethoxycaprylylsilane	Treated pigment	6.90
ACT96-TRI-77499	CI 77499 (and) Disodium Stearoyl Glutamate (and) Aluminum Dimyristate (and) Triethoxycaprylylsilane	Treated pigment	15.20
Cocoate BG MB	Butylene Glycol Cocoate	Binder	2.80
TroyCare PE73	Phenoxyethanol (and) Ethylhexylglycerin	Preservative	0.50



Before

After

Formulation guidelines

MINIMALIST REVIVING MASK (HC 007)

Name	INCI	Function	%
Water	Deionized Water	Vehicle	92.2
FLOCARE™ C 139 PF	Polyquaternium-39	Conditioner	1.00
Massocare IPP	Isopropyl Palmitate	Emollient	3.00
Mikrokill COS	Phenoxyethanol (and) Chlorphenesin (and) Caprylyl Glycol	Preservative	0.80
FLOCARE™ ET 1737 GPG*	Polyquaternium-37 (and) Propylene Glycol Dicaprylate/Dicaprate (and) PPG-1 Trideceth-6	Rheology modifier	3.00

** FLOCARE™ PSD 1037 LV could also be used*

BEARD BALM (SK 023)

Name	INCI	Function	%
Water	Aqua	Solvent	To 100%
Dissolvine NA2	Disodium EDTA	Chelating agent	0.05
Glycerin	Glycerin	Humectant	1.20
FLOCARE™ PSD 1037 LV	Polyquaternium-37	Rheology modifier / Conditioner	1.20
Cetiol OE	Dicaprylyl Ether	Emolient	2.00
Natura-Tec Argan Oil refined	Argania Spinosa Kernel Oil	Emollient	1.00
Tocobiol C	Tocopherol (mixed), Beta-Sitosterol, Squalane	Antioxidant	0.05
Lincoserve WpH-LO	Pentylene Glycol, Caprylyl Glycol, Propanediol, Ethylhexylglycerin	Preservative	1.00
D Panthenol 75W	Panthenol	Active	0.50
Blue Hour	Parfum	Fragrance	0.20

Formulation guidelines

CLEAR CONDITIONER (HC 015)

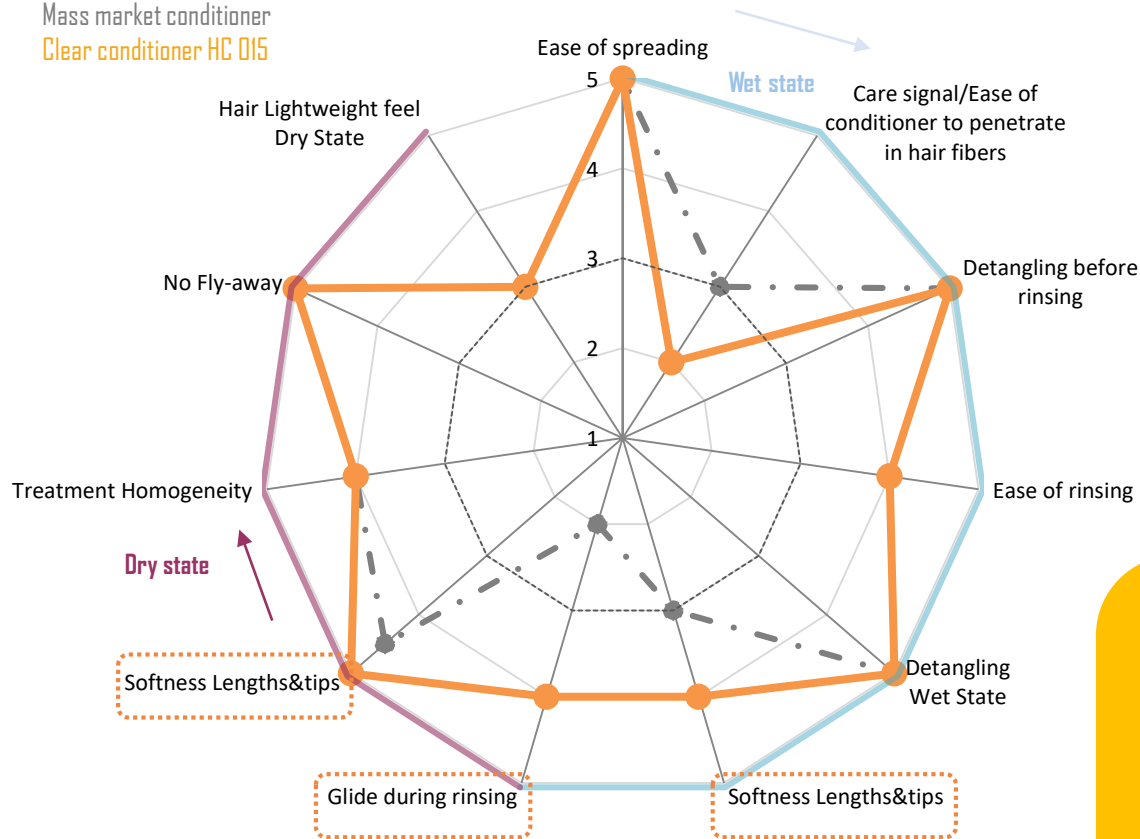
Name	INCI	Function	%
Water	Aqua	Solvent	To 100%
NATURSOL™ G202	Hydroxypropyl guar hydroxypropyl trimonium chloride	Conditioner	0.50
FLOCARE™ PSD 1037 XT	Polyquaternium-37	Rheology modifier / Conditioner	1.00
Saealoe Vera Juice	Aloe Barbadensis (Leaf) Juice	Active	3.00
Phenoxyethanol	Phenoxyethanol	Preservative	0.80
Citric Acid (10% solution)	Citric Acid, Aqua	pH adjuster	Qs pH 4

Viscosity (cP) at 5 rpm = 18000 - 25000



Sensorial assessment on hair

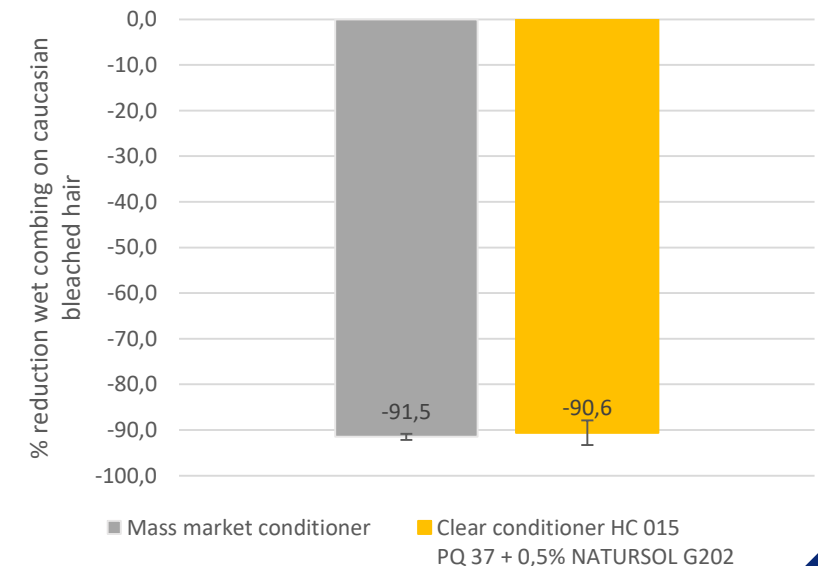
Mass market conditioner
Clear conditioner HC 015



- ✓ Enhanced softness
- ✓ Better glide during rinsing
- ✓ Equivalent combing performances compared to mass market product containing BTAC*

CLEAR CONDITIONER (HC 015)

Name	INCI	Function	%
Water	Aqua	Solvent	To 100%
NaOH (10% solution)	Aqua, Sodium Hydroxide	pH adjuster	qs
NATURSQL™ G202	Hydroxypropyl guar hydroxypropyl trimonium chloride	Conditioner	0.50
FLOCARE™ PSD 1037 XT	Polyquaternium-37	Rheology modifier / Conditioner	1.00
Saealoe Vera Juice	Aloe Barbadensis (Leaf) Juice	Active	3.00
Phenoxyethanol	Phenoxyethanol	Preservative	0.80
Citric Acid (10% solution)	Aqua, Citric Acid	Adjust to pH 4	qs



Conclusion

Benefits

Sustainability

- Cold process for better sustainability
- Rapid viscosity development, time and energy saving
- Available in both liquid and powder form

Purity

- Preservative free
- Ideal for minimalist formulation with short ingredient list
- Transparent formula possible with FLOCARE™ PSD 1037XT

Efficiency

- Possibilities of large range viscosity over wide pH range
- Auto-emulsifying up to 20% oil
- Conditioning benefit boosted by FLOCARE™ C139 PF
- Straightening properties of FLOCARE™ PQ37 even at 80% HR

Applications

- Hair conditioner
- Hair treatment product
- Hair styling
- Hair coloring
- Beard softening



THANK YOU

Any questions ?

BACK-UP

Viscosity specifications

VISCOSITY @ 2% in water	
FLOCARE™ ET 1237 PPI	20 000 – 40 000 cPs
FLOCARE™ ET 1737 GPG	20 000 – 40 000 cPs
VISCOSITY @ 1% in water	
FLOCARE™ PSD 1037 LV	15 000 – 25 000 cPs
FLOCARE™ PSD 1037XT	15 000 – 35 000 cPs

Conditioners (benchmarks)



Le Petit Marseillais

ingredient list: Aqua, Cetearyl Alcohol, Glycerin, Persea Gratissima Oil, Hydroxypropyl Starch Phosphate, **Behentrimonium Chloride**, Cocos Nucifera Fruit Juice, Citrus Aurantium Amara Flower Extract, Isopropyl Alcohol, Citric Acid, Sodium Benzoate, Potassium Sorbate, Parfum, Alpha-Isomethyl Ionone, Citronellol

The price in France is around 6€, i.e 20€/kg



Mascara Vegana (Inoar Afro Vegan)

INCI list : Aqua, Cetearyl Alcohol, Glycerin, Cetearyl Alcohol (and) Polysorbate 60, Hydroxyethylcellulose, Ricinus Commuis (Castor) Seed Oil, Butyrospermum Parkii Seed Buter, Tocopheryl Acetate, Panthenol, **Behentrimonium Methosulfate**, **Cetrimonium Chloride**, Disodium EDTA, Citric Acid, BHT, Phenoxyethanol.

The price is brazil is 42,90 R\$, i.e.85,80 R\$/kg

Hair straightening cream (benchmarks)

PROFESSIONAL STRAIGHTENING CREAM



WATER, PVM/MA COPOLYMER, POLYIMIDE-1, GLYCERIN, GLYCERYL ACRYLATE/ACRYLIC ACID COPOLYMER, CAPRYLYL GLYCOL, PHENOXYETHANOL, **CYCLOPENTASILOXANE**, **GUAR HYDROXYPROPYLTRIMONIUM CHLORIDE**, ACRYLIC ACID/VP CROSSPOLYMER, SODIUM POLYACRYLATE, FRAGRANCE (PARFUM), TETRASODIUM EDTA, PEG-4 DILAUATE, PEG-4 LAURATE, IODOPROPYNYL BUTYLCARBAMATE, PEG-4, DISODIUM EDTA, BENZYL ALCOHOL, BENZYL BENZOATE, BUTYLPHENYL METHYLPROPIONAL, CITRAL, HEXYL CINNAMAL, LIMONENE, LINALOOL

PREMIUM STRAIGHTENING CREAM

WATER, CETEARYL ALCOHOL , **AMODIMETHICONE** , CETYL ESTERS ,**BEHENTRIMONIUM CHLORIDE**, PHENOXYETHANOL ,GLYCERIN , ISOPROPYL ALCOHOL , TRIDECETH-6 , VITIS,VINIFERA SEED OIL / GRAPE SEED OIL , HEXYL CINNAMAL, **GUAR HYDROXYPROPYLTRIMONIUM CHLORIDE**, CHLORHEXIDINE DIHYDROCHLORIDE , LINALOOL, BENZYL,BENZOATE, **CETRIMONIUM CHLORIDE**, HYDROXYPROPYLTRIMONIUM HYDROLYZED WHEAT,PROTEIN , LIMONENE, MAGNESIUM ACETATE, ALPHASOMETHYL,IONONE , 2-OLEAMIDO-1,3-OCTADECANEDIOL, CITRIC ACID , BENZYL ALCOHOL , ASPARTIC ACID ,GLYCINE, ARGININE, GLUTAMIC ACID , EUGENOL ,FUMARIC ACID , TOCOPHEROL , HELIANTHUS ANNUUS,SEED OIL / SUNFLOWER SEED OIL , ROSMARINUS,OFFICINALIS (ROSEMARY) EXTRACT , PARFUM /FRAGRANCE .



Clear conditioner (benchmark)



Gelée démêlante HYDRA-ILLUMINANTE DESSANGE

WATER, GLYCERIN, PEG-40 HYDROGENATED CASTOR OIL, CAPRYLYL/CAPRYL GLUCOSIDE, HYDROXYETHYL CELLULOSE, **BEHENTRIMONIUM CHLORIDE**, TIN OXIDE, LINALOOL, PHENOXYETHANOL, ISOPROPYL MYRISTATE, PROPYLENE GLYCOL, ISOPROPYL ALCOHOL, HYDROXYETHYL OLEYL DIMONIUM CHLORIDE, CITRONELLOL, CITRIC ACID, QUATERNIUM-80, LACTIC ACID, **POLYQUATERNIUM-10**, PARFUM