Fresh'in Green+

LONG LASTING COOLING AGENT

- ***Alternative to menthol***
- ***Liquid easy to formulate***
- ***Patent pending***
- ***Pentylene Glycol*** *and* ***Methyl Diisopropyl Propionamide***

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green solving attitude.

Fresh’in

Fresh’in Green +

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Refreshing Agents

What are they good for? Why use them?

Freshness = **Feeling** = Efficiency

Dynamism Wellness Youth

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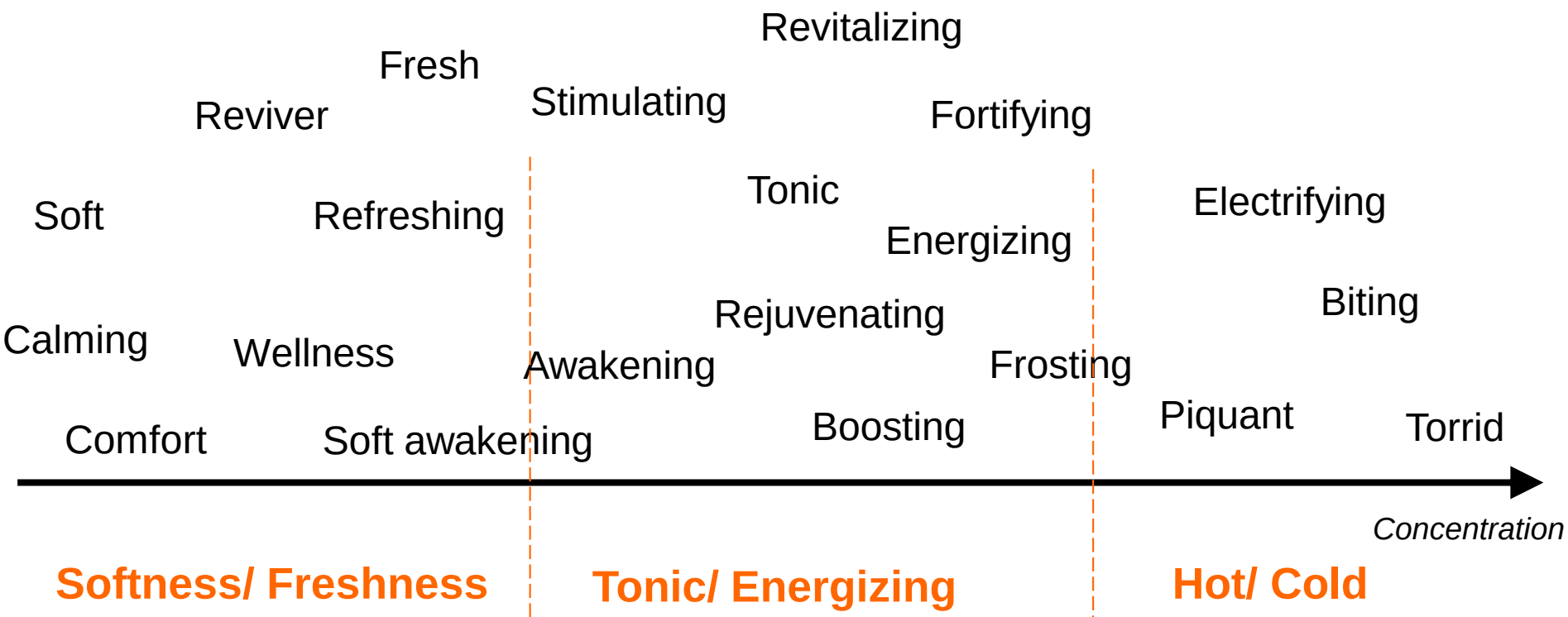
Claims related to freshness



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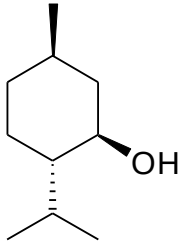
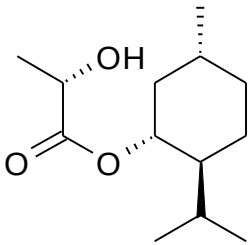
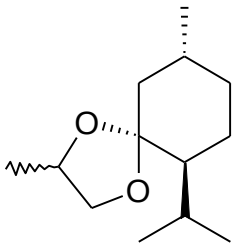
Common Refreshing Agents



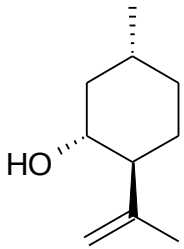
Menthol



Menthyl lactate



Menthone glycerin acetal



Isopulegol

Restrictions:

- Difficult to formulate
- Odor is difficult to mask
- Short term sensation
- Limited application zone

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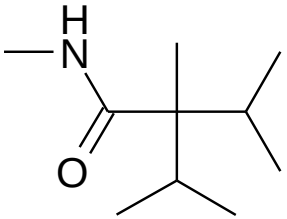
Fresh‘in
Fresh‘in Green+

Minasolve has worked on a refreshing molecule historically used in food products and oral care applications.

This ingredient is introduced in 2 versions to the cosmetic industry :

Fresh’in



Fresh’in Green +

PATENT PENDING

Powder form

Liquid form

=> Allergen-free cooling agents

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Fresh‘in – Fresh‘in Green+ Characteristics

	Fresh’in	Fresh’in Green +
Appearence	White crystalline powder	Colourless liquid
Odor	Fresh	Fresh
Solubility	Alcohol, 1,2-alkanediols, cosmetic ester and ethers like e.g. Dicaprylyl Ether, Caprylic/Capric Triglyceride	Alcohol, 1,2-alkanediols, **water**, cosmetic ester and ethers like e.g. Dicaprylyl Ether, Caprylic/Capric Triglyceride
INCI	Methyl Diisopropyl Propionamide	Pentylene glycol (and) Methyl Diisopropyl Propionamide
% of use	0,04 – 1,50 % (1)	0,10 – 2,50 % (2)
Formulation	• Can be introduced in the oily or aqueous phase depending on the solvent used • Hot pre-solubilisation recommended	• Flexible formulation • Direct introduction in the formulation • Can be used in cold process

Patent pending solution for simplified formulation:
- ➲ **No pre-treatment necessary**
- ➲ **Production cost reduction**

(1) Max recommended use level for a leave-on body application: 0,04%
(2) Max recommended use level for a leave-on body application: 0,10%

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Fresh‘in
Efficacy Test

Aim of the study:

- Investigate duration of the cooling effect

Two identical gel-creams:

- One containing 0.5 % Fresh ‘in
- One containing 0.5 % L-Menthol

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Fresh‘in
In-Vivo Study

Panel

- 33 men, 33 women
- Aged from 18 to 50 years
- Any skin type and skin sensitivity
- Application of product on:
  - one face area
  - one body area

Evaluation criteria

- Onset time of the cooling effect
- Persistence of the cooling effect
- Intensity of freshness
- Comparison between the formulation containing L-menthol and the one containing Fresh‘in

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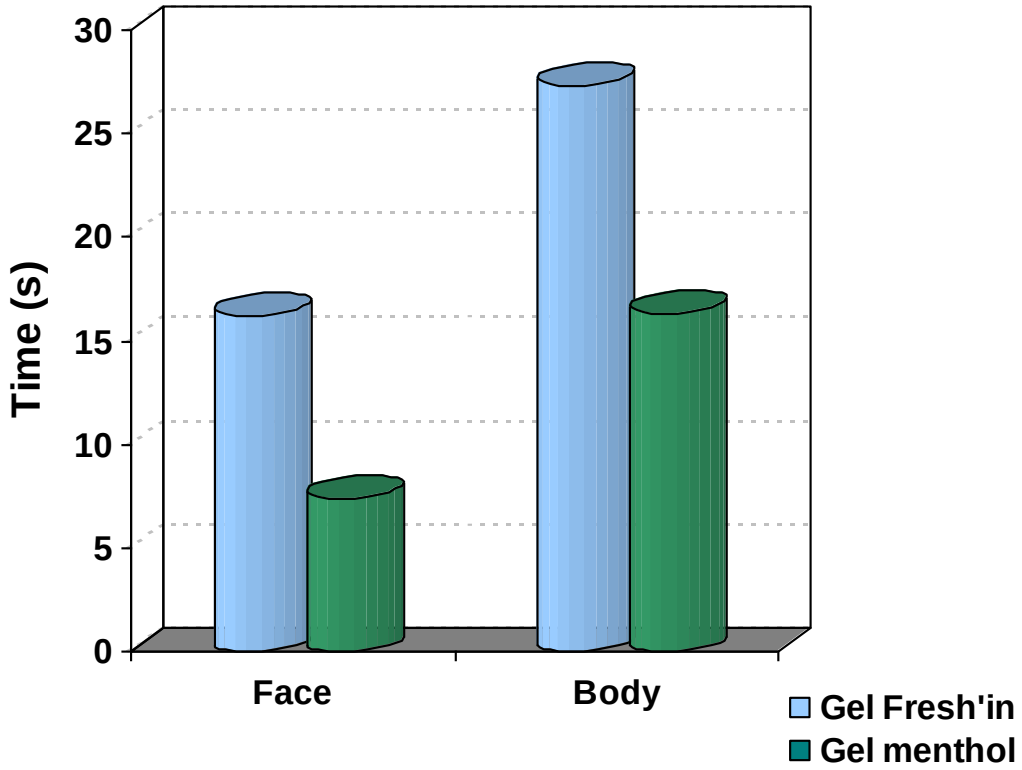
Fresh‘in
In-Vivo Study

Onset time until start of the cooling effect



Face :

16.2 s Fresh ‘in vs. 7.4 s Menthol

➡ **Significant difference**

Body :

27.3 s Fresh ‘in vs. 16.3 s Menthol

➡ **Significant difference**

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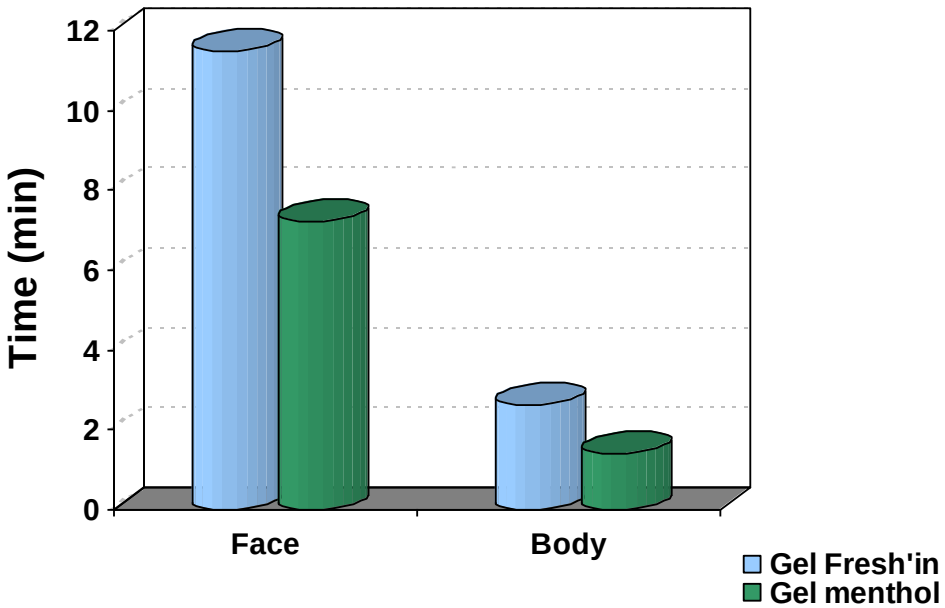
Fresh‘in
In-Vivo Study

Duration of the cooling effect



Face :

11.5 min Fresh ‘in vs. 7.2 min Menthol

➡ **Significant difference**

Body :

2.6 min Fresh ‘in vs. 1.4 min Menthol

➡ **Significant difference**

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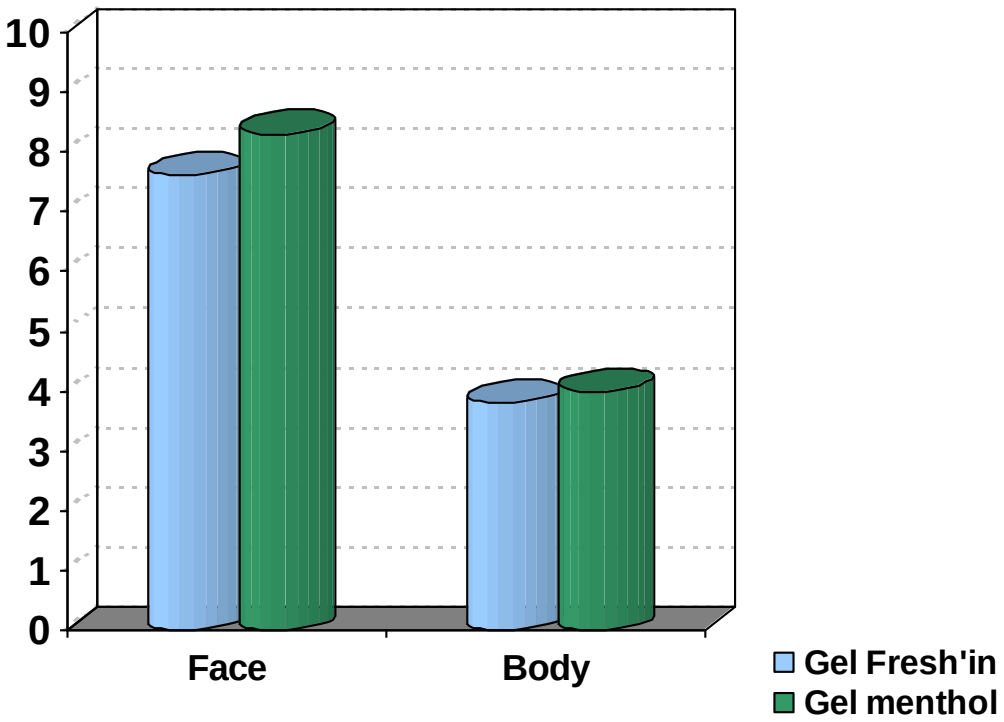
Fresh‘in
In-Vivo Study

Intensity of the cooling effect

scale: from 0 (no effect) to 10 (very strong effect)



Face :

7.6 Fresh ‘in vs. 8.3 Menthol

➡ **Comparable effects**

Body :

3.8 Fresh ‘in vs. 4.0 Menthol

➡ **Comparable effects**

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Fresh‘in
In-Vivo Study

The refreshing effect of Fresh‘in stands out for:

- its **« delayed » action**
- its **« long-lasting » effect**

2 out of 3 consumers preferred the cooling effect of Fresh‘in.

Freshness preference	**Gel A Fresh‘in**	Gel B Menthol
	65,2 %	34,8 %

Odor preference	**Gel A Fresh ‘in**	Gel B Menthol
	54,5 %	45,5 %

In general, the freshness of Fresh‘in has been appreciated and preferred for its progressive, long-lasting, and pleasant effect.

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Fresh‘in – Fresh‘in Green+
HRIPT (Human Repeated Insult Patch Test)

HRIPT protocol :

Skin compatibility study and absence of allergenic potential, after repeated applications of the ingredients under occlusive conditions*, over 36 days.

**Patch material :* Occlusive patch Finn Chamber standard

HRIPT	Fresh‘in & Fresh‘in green +
Number of subjects*	50
Age	18-65
Type of skin	All types
Skin Phototype	I to IV
RESULT	- No irritative reaction - Very good skin compatibility - No allergic reaction

*Within the focus group, a panel of about 30 % has a sensitive skin. After the test, nobody showed skin reaction

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MINASOLVE chose to illustrate
Fresh'in and Fresh'in Green+
with 2 ranges of refreshing cosmetic products!

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Fresh‘in – Fresh‘in Green+ Concept

Fresh’in

Products intended to stimulate the senses and to surprise with their refreshing effects

Stand-up, Clean-up! 3 in 1 gel

Tonic! Water

Fresh Kiss Lipstick

Fresh’in Green +

Simple, practical and essential products to regain freshness before, during or after intense physical activity

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Fresh‘in
Fresh‘Kiss Lipstick

Phase	Ingredients	%
A	Beeswax *(Cera Alba)*	20.00
	Lipovol CO (1) *(Ricinus Communis (Castor) Oil)*	45.00
	Jojoba Oil (2) *(Simmondsia Chinensis (Jojoba) Seed Oil)*	24.30
	Lipex Cocoasoft (3) *(Theobroma Cacao Butter)*	10.00
	Fresh’in (4) **(Methyl Diisopropyl Propionamide)**	**0.40**
	Pigments *(Carmine (and) Titanium Dioxide (and) Mica)*	0.20
B	DL-α-Tocopherol (>97%) *(Tocopherol)*	0.10

Manufacturing process:

1 – Mix ingredients from phase A while heating up to 75 ° C. Stir to homogenise.

2 – At 75 ° C, add phase B while stirring then pour the mixture rapidly into a cold mould. Cool down at 5° C for at least 30 minutes.

Properties and stability:

Aspect : Pink opaque solid

Stable during 3 months at 8 ° C, 42 ° C and room temperature, as well as during centrifugation for 1 hr at 20 ° C and 1500 g.

Raw Material Suppliers:

(1) Lipo Chemicals
(2) Caesar & Loretz
(3) AAK
(4) Minasolve

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Fresh‘in Green+ Tonic! Water

Cold manufacturing process:

1 – Disperse Rewoteric AMC in water and stir until complete homogenisation.

2 – Add to phase A the ingredients from phase B, in the given order. Stir until complete homogenisation.

3 – Mix the ingredients of phase C and add the premix to phase A/B mixture. Stir until complete homogenisation.

4 – Add phase D. Stir until complete homogenisation.

5 – Adjust pH with phase E.

Properties and stability:

Aspect : Clear solution

pH : 5.0 - 5.5

Stable during 3 months at 8 ° C, 42 ° C and room temperature, as well as during centrifugation for 1 hr at 20 ° C and 1500 g.

Phase	Ingredients	%
A	Water *(Aqua)*	92.3
	Rewoteric AMC (1) *(Sodium Cocoamphoacetate)*	2.0
B	Sodium Benzoate *(Sodium Benzoate)*	0.6
	Glycerin *(Glycerin)*	2.0
C	Perfume Clear Water (2) *(Parfum)*	0.2
	Pentiol (3) *(Pentylene Glycol)*	2.4
D	**Fresh’in Green+ (3)** ***(Pentylene Glycol (and) Methyl Diisopropyl Propionamide)***	**0.5**
E	Citric Acid (50%) *(Aqua (and) Citric Acid)*	qs

Raw Material Suppliers:

(1) Evonik
(2) Luzi
(3) Minasolve

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Fresh'in Green+
Stand-up! Clean-up! 3 in 1 Gel

Cold manufacturing process:

1 – Add Celquat SC-240C to water under stirring (500 rpm) during 5 - 10 minutes. Add EDTA and stir until complete homogenisation.

2 – Successively add the ingredients from phase B to phase A. Stir at 400 rpm until complete homogenisation.

3 – Add Antil 120 Plus and stir at 1200 rpm for 30 – 40 minutes until complete homogenisation.

4 – Add Lamesoft PO 65. Stir at 500 rpm for 10 minutes.

5 – Successively add the ingredients from phase E. Stir at 400 rpm until complete homogenisation.

6 – Adjust pH to 5.0 – 5.5 with citric acid solution. Adjust viscosity with sodium chloride.

Properties and stability:

Aspect : Clear gel

pH : 5.0 – 5.5

Stable during 2 months at 8 ° C, 42° C and room T° C, as well as during centrifugation for 1 hr at 20 ° C and 1500g

Raw Material Suppliers:
(1) Akzo Nobel; (2) Evonik; (3) BASF; (4) Luzi; **(5) Minasolve**

Phase	Ingredients	%
A	Water *(Aqua)*	45.05
	Celquat SC-240C Polymer (1) *(Polyquaternium-10)*	0.50
	Dissodium EDTA *(Dissodium EDTA)*	0.15
B	Tego Betain F50 (2) *(Cocamidopropyl Betaine)*	4.00
	Tego Betain 810 (2) *(Capryl / Capramidopropyl Betaine)*	4.00
	Plantapon AGC HC (3) *(Sodium Cocoyl Glutamate)*	6.00
	Texapon NSO UP (3) *(Sodium Laureth Sulfate)*	35.00
C	Antil 120 Plus (2) *(120-PEG Methyl Glucose Dioleate)*	0.65
D	Lamesoft PO 65 (3) *(Coco Glucoside (and) Glyceryl Oleate)*	2.00
E	Sodium Benzoate *(Sodium Benzoate)*	0.50
	Perfume Clear Water *(Parfum)* (4)	0.80
	Fresh'in Green+ (5) *(Pentylene Glycol (and) Methyl Diisopropyl Propionamide)*	**0.60**
F	Citric Acid (50%) *(Aqua (and) Citric Acid)*	qs
	Sodium Chloride *(Sodium Chloride)*	0.75

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Minasolve® is an affiliate of The MINAFIN® Group

Created in 2004, The MINAFIN® Group, specializes in fine chemistry for the life sciences and high the industries. Activities include industrial subcontracting, development of chemical syntheses and industrial scale-up of custom-made processes as well as proprietary products with high added values for the pharmaceutical, cosmetics, agriculture and high tech industries. **Strong synergies exist between all business unites :**

- Minakem
- Minagro
- Pennakem
- Pressure Chemical
- Minascent
- EcoXtract

Serving market leaders as well as emerging players, we support our customers' efforts to improve the quality of life in the global community by :

- Improving our chemistry and operational excellence today
- Creating and innovating for tomorrow
- Driving our enterprises together to go beyond expectations

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THANK YOU FOR YOUR ATTENTION

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