

# Fermentoil Hair Complex

*Do you have Frizz hair?  
How about applying **fermentoil**?*



# Hair concerns

## Frizzy Hair



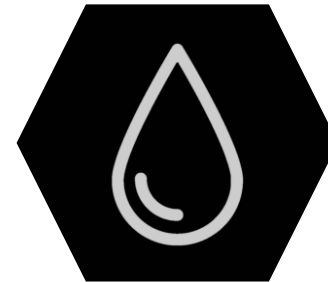
Damaged Hair



Dry Hair



Split ends



Oily/Greasy Hair



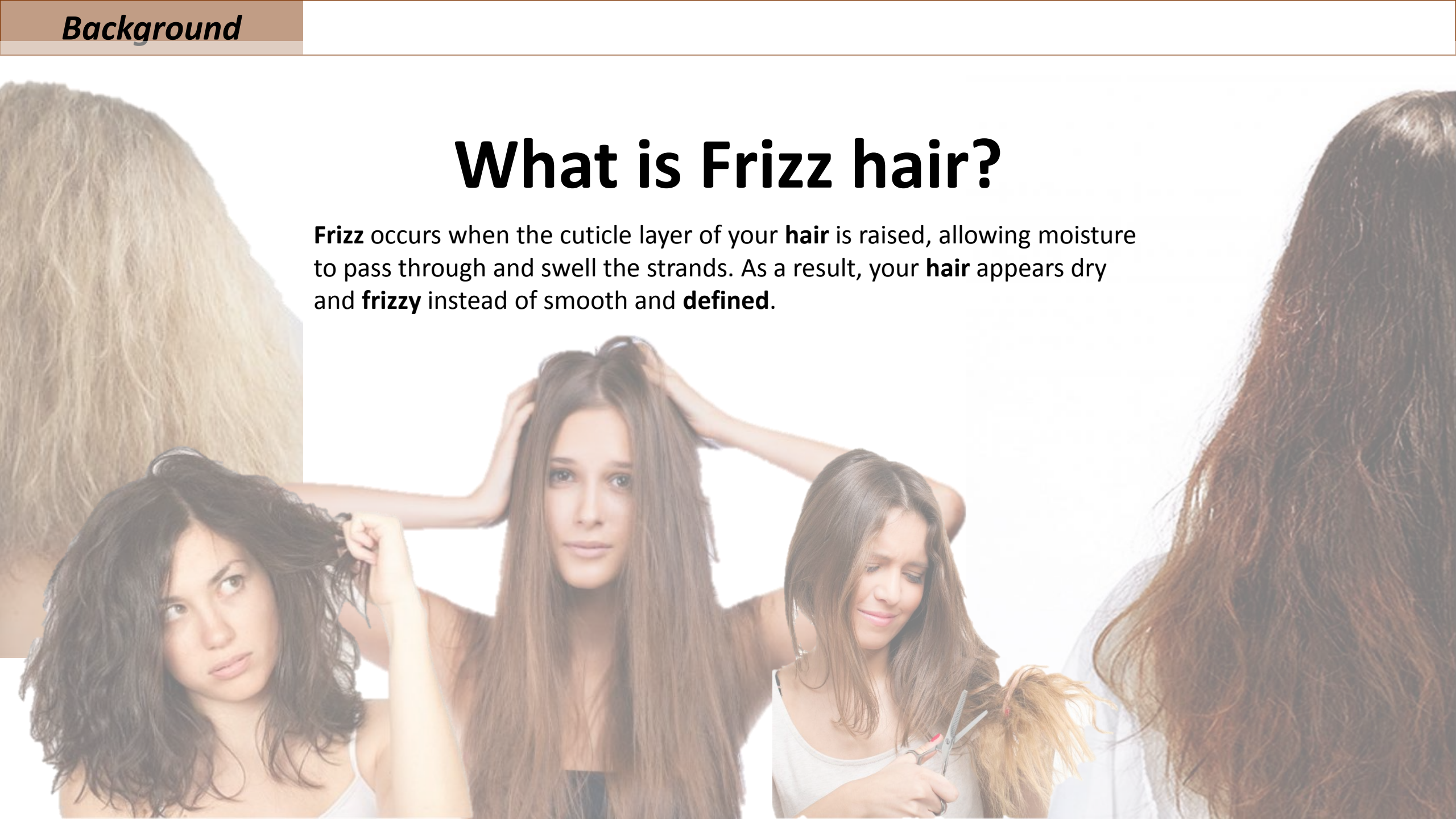
Dandruff



Hair loss

# What is Frizz hair?

**Frizz** occurs when the cuticle layer of your **hair** is raised, allowing moisture to pass through and swell the strands. As a result, your **hair** appears dry and **frizzy** instead of smooth and **defined**.





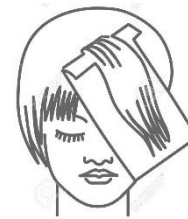
# Reasons of Frizzy hair



**UV Irritation**



**Combing**



**Hair coloring**



**Hair styling**

# Solution for Frizzy hair

## **Use a thermal protective formula**

The thermal protective formula will provide a barrier between hair strand and the heat

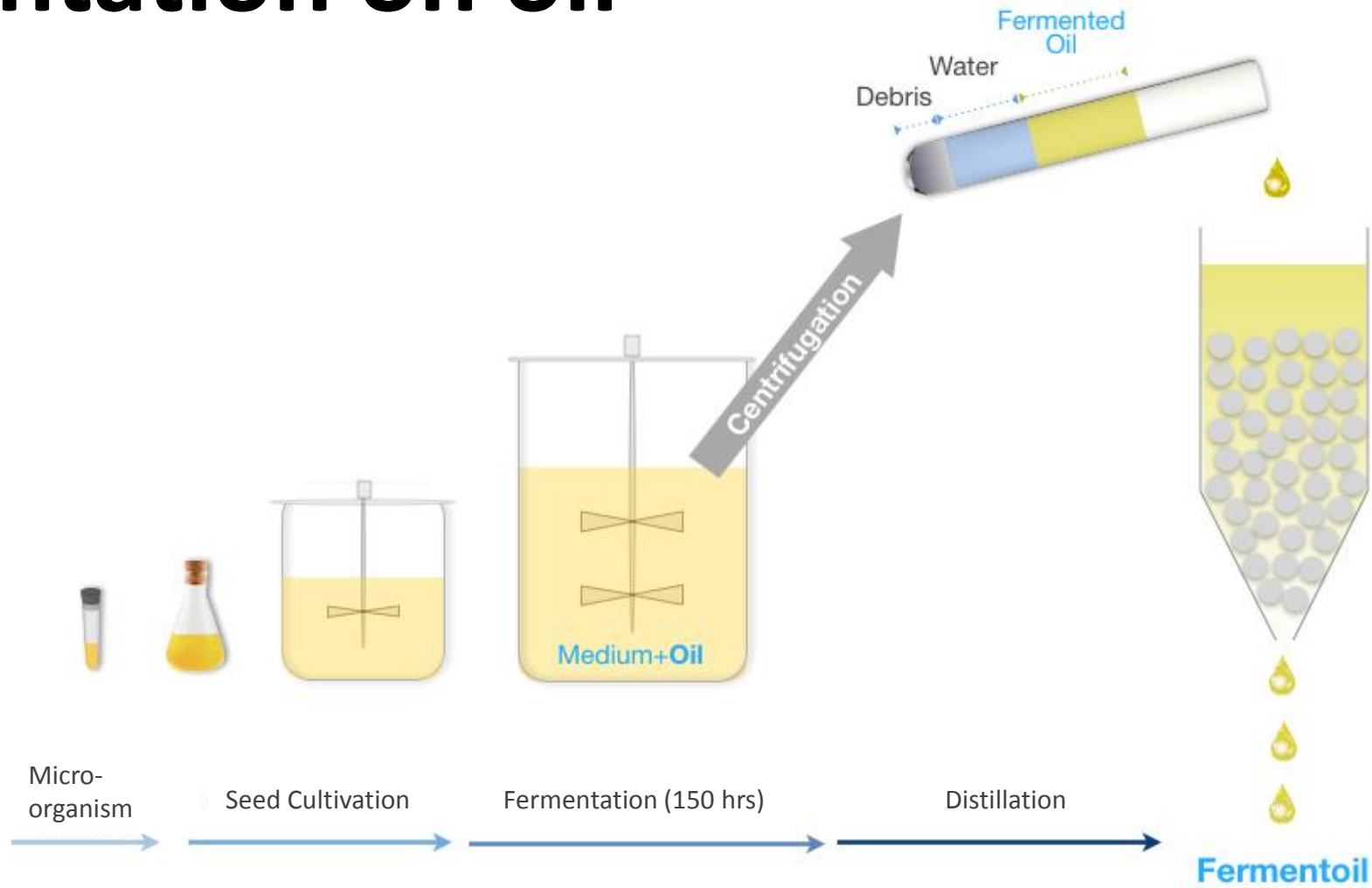
## **Avoid chemical hair products**

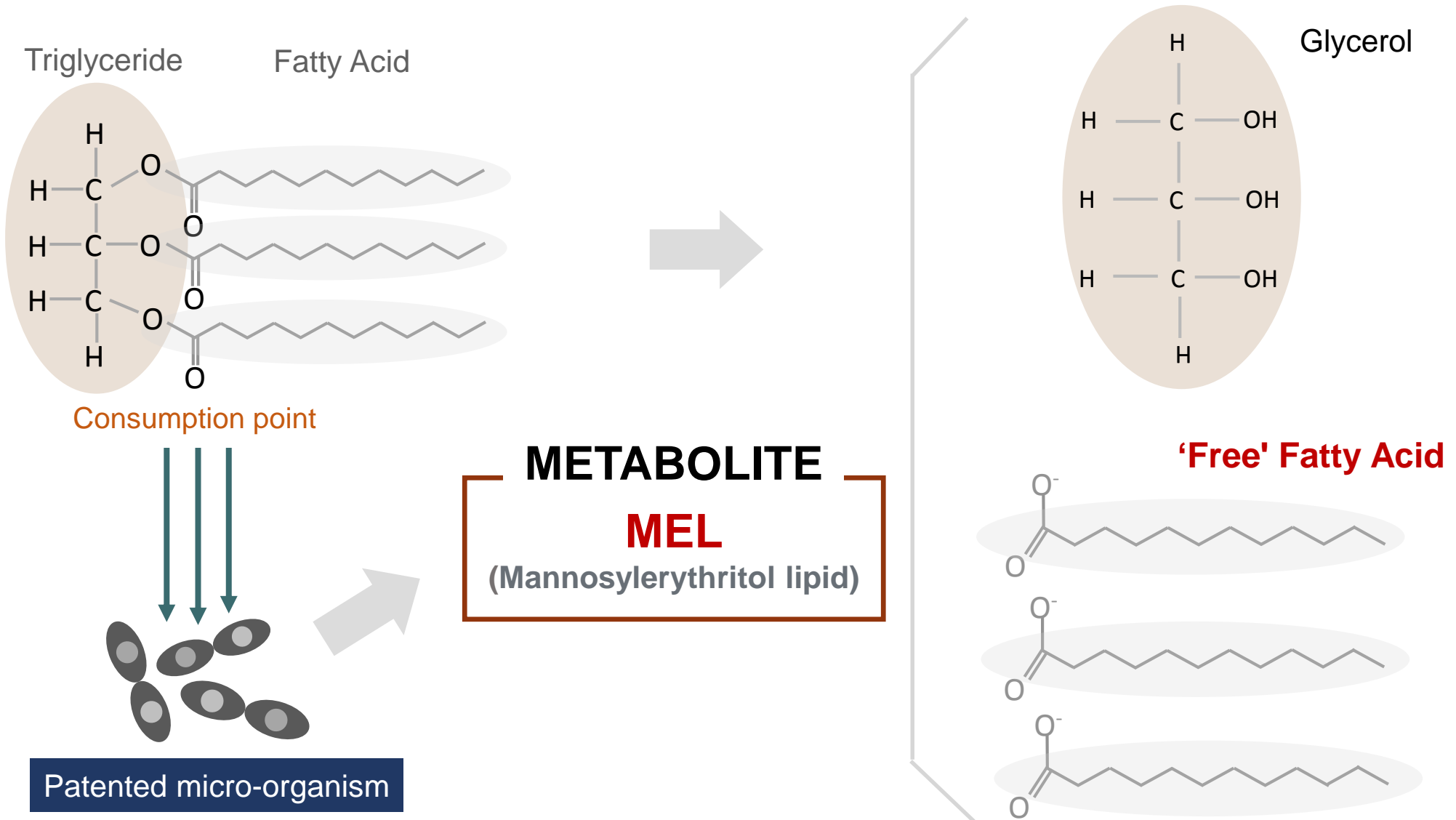
Hair colors, highlights, Shampoos which contain chemicals can cause frizz hair

## **Moisture your hair**

The volume and shape of frizz hair make it difficult to be moisturized by scalp's natural oil

# Fermentation on oil





# Argan oil

## Material

Linolenic acid / Oleic acid / Vitamin E / Polyphenol

## Benefits

Promote hair growth / Moisturizing / Anti-frizz /

Eliminate dandruff, dry scalp / Treating hair loss / Sun protection

## Story

- Selected Argan grown under optimal conditions of Morocco

- Valuable oil that only 1 liter is obtained from 7 trees





# Camellia seed oil



## Material

Linolenic acid / Oleic acid / Vitamin E / Stearic acid

## Benefits

Moisturizing / Anti-oxidant / Prevent split ends / Shine & Smooth / Sun protection

## Story

- Camellia oil treats damage from split ends, perms and colorants.
- Using a wooden comb with Camellia oil helps stop split ends and Anti-static.

# Green tea seed oil



## Material

Catechin / Tocopherol / Oleic acid / Omega 3,6 and 9

## Benefits

Moisturizing / Anti-oxidant / Hair conditioning / Promote hair growth

## Story

- Green tea seed oil prevent re-injury to the heat and UV rays for colored and decolored hairs.

# Sunflower seed oil

## Material

Linoleic acid / Phytosterol / Vitamin E / Polyphenol

## Benefits

Conditioning greasy hair / Anti-Frizz / Promote hair growth

## Story

- Sunflower seed has been used by American Indian tribes for skin and hair care.
- Massaging sunflower oil into the hair and scalp can help growth of hair follicle and strengthening.



# Sweet almond oil

**Material** Calcium / Omega-6 fatty acids / Vitamin E

**Benefits** Treat dandruff / Reduce hair loss / Moisturizing / Strengthening hair

**Story**

- Almond oil promotes repairing cuticles
- Egyptians noticed that almond oil provided hair with bright sheen and silky texture



# Fermentoil hair complex

Sunflower seed



Green tea seed



Argan



Camellia seed



Sweet Almond

**Fermentation**

## Anti-Frizz

- ▶ Taming frizz hair
- ▶ Promoting shine and gloss
- ▶ Moisturizing

## Additional effect

- ▶ Each oils has different effects, when it comes together and fermented, the additional effect can be expected.

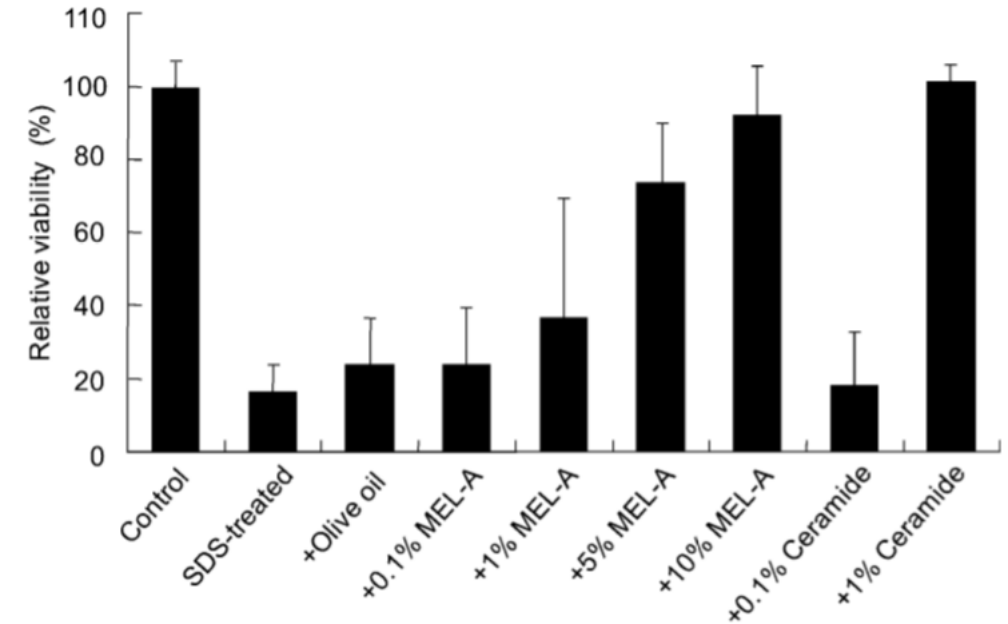
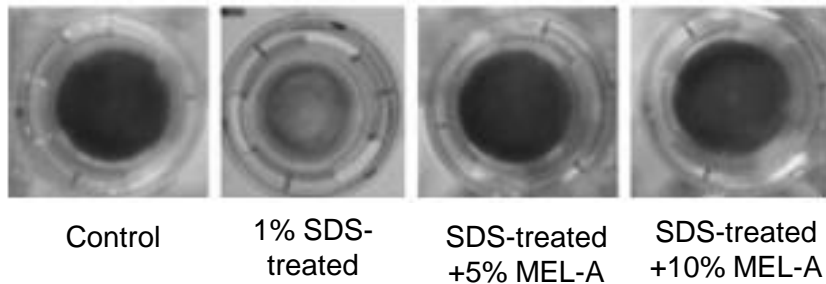
## Better texture

- ▶ Bio-technology brings the oil with the fresher feeling, Better efficacy.

That comes through the process we call 'Fermentation'. It is the most natural but delicately controlled process.



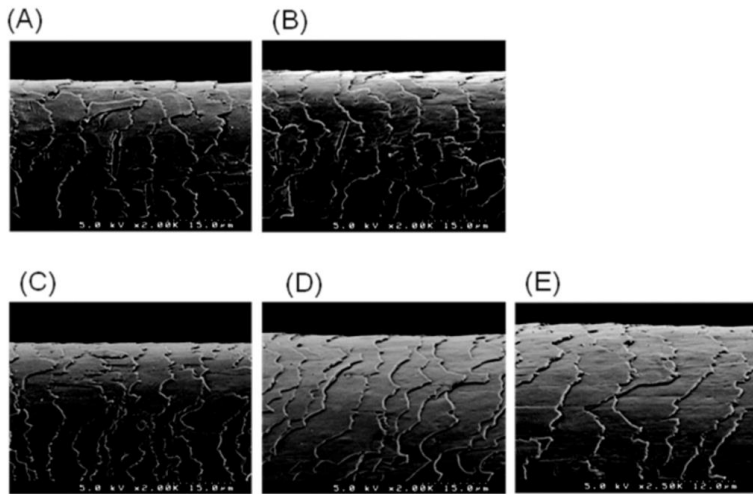
# Moisturizing



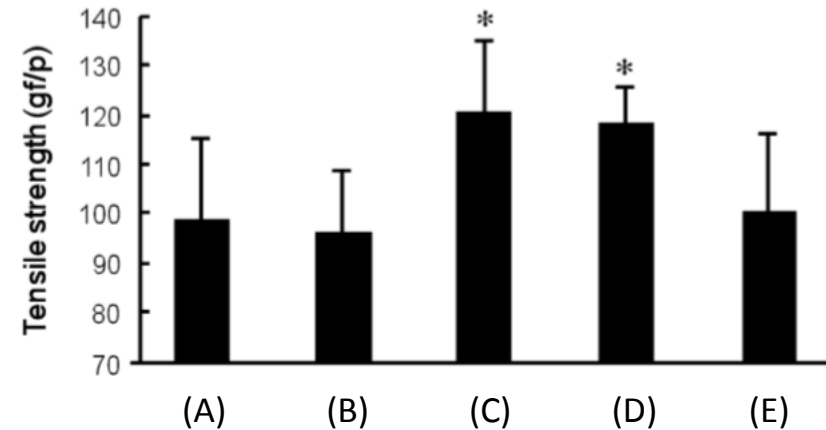
Reference : A yeast glycolipid biosurfactant..., Journal of Oleo science, 58, (12) 639-642 (2009)

The recovery effect of MEL toward the SDS-damaged cells is probably due to the moisturizing activity, considering the well-known skin care properties of ceramides.

# Repairing damaged hair



- (A) The artificial damaged hair
- (B) The treatment with only ,lauryl glucoside
- (C) MEL-A
- (D) MEL-B
- (E) Ceramide



- (A) Treated with water
- (B) Treated with lauryl glucoside
- (C) Treated with MEL-A
- (D) Treated with MEL-B
- (E) Treated with Ceramide

Reference : Glycolipid Biosurfactants, Mannosylerythritol lipids, Repair the damaged hair, Journal of Oleo Science, 59, (5) 267-272 (2010)

MELs have great potential for the novel hair care material,  
not only repairing damaged hair but also providing the smooth and flexible hair.

**Before**

**After**

**Test information**

- ▶ 100% Fermentoil hair complex
- ▶ 1 ml (1 pumping)
- ▶ Volunteers : 7 female
- ▶ Immediate change after applying

**Self assessment**

- ▶ Enhance curling of hair
- ▶ Reduce frizz feeling
- ▶ Less greasy feeling
- ▶ Strengthen the hair



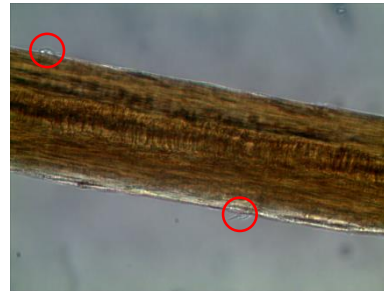
# Repairing damaged hair

## Test information

- ▶ 100% Fermentoil hair complex
- ▶ 1 ml (1 pumping)
- ▶ 4 weeks, twice/day
- ▶ Volunteers : 7 female

### Dyed hair

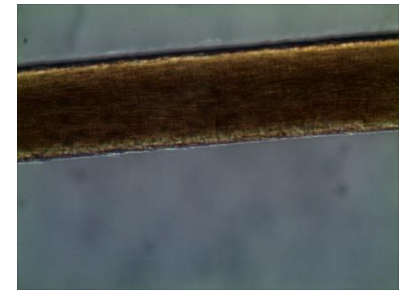
Before



After 2 weeks



After 4 weeks

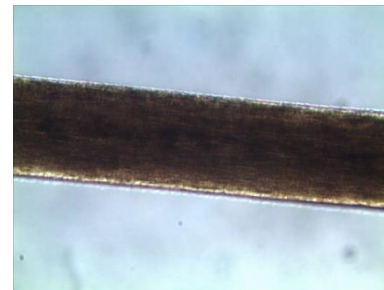


### Natural hair

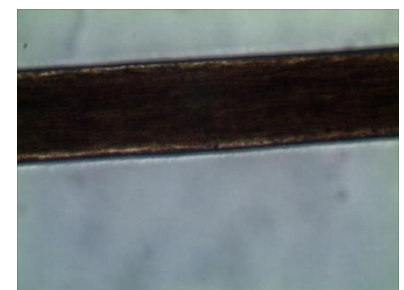
Before



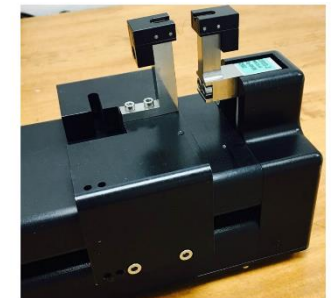
After 2 weeks



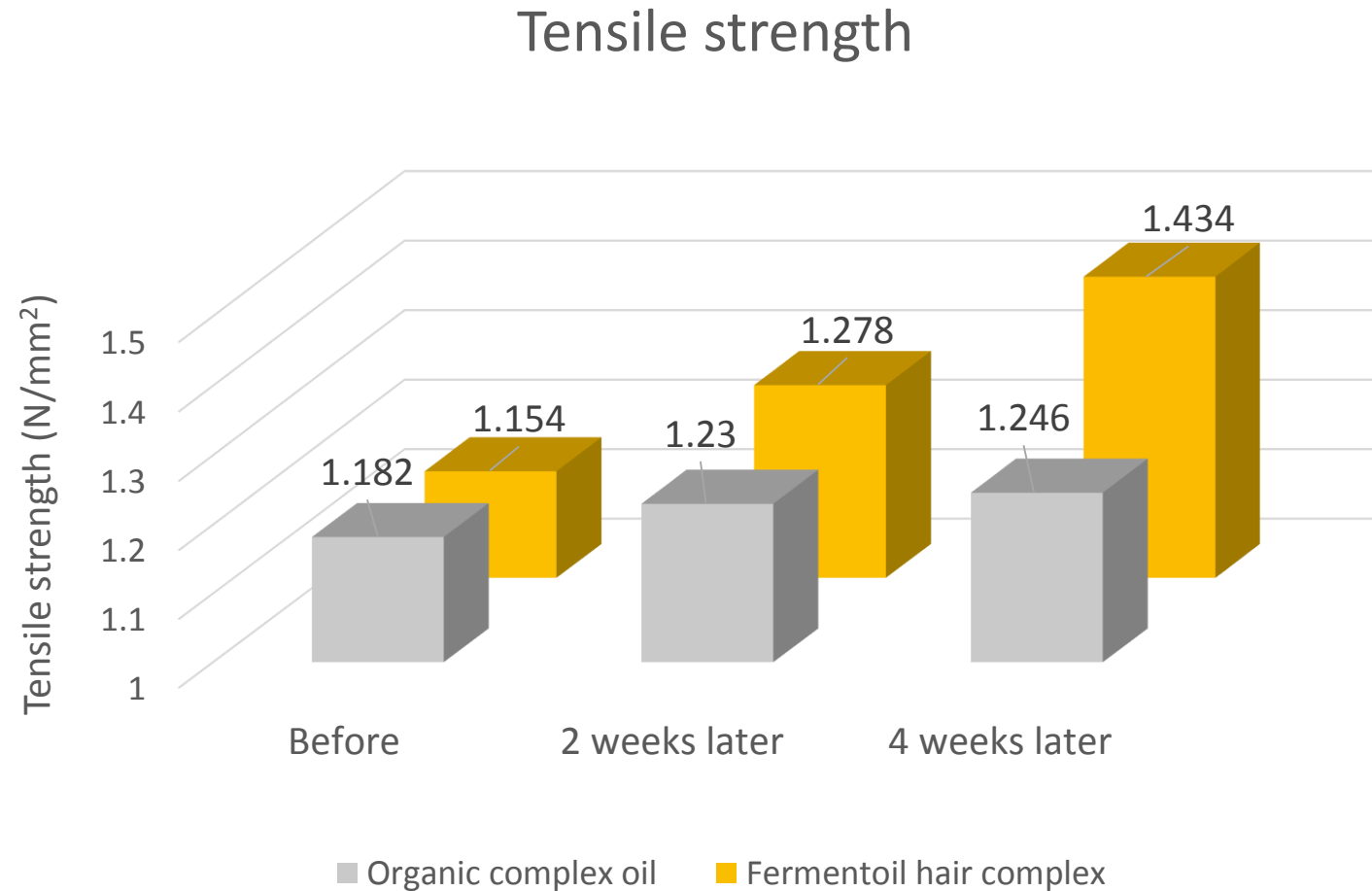
After 4 weeks



Subjects of experiment	21 female (average age : 39)
Place of experiment	Constant temperature and humidity room ( $20\pm 2^{\circ}\text{C}$ , 40%)
Experimental period	4 weeks (once/day)
Test area	Occiput region
Test sample	Fermentoil hair complex 100%
Test material application	Spread suitable quantity on wet hair
Evaluation method	1. Evaluating tensile improvement through Imada DS2-5N 2. Evaluating safety by Dermatologist
Statistic analysis methods	Minitab 17.3.1, Minitab Inc.
Test institute	Korea Institute for Skin and Clinical Sciences

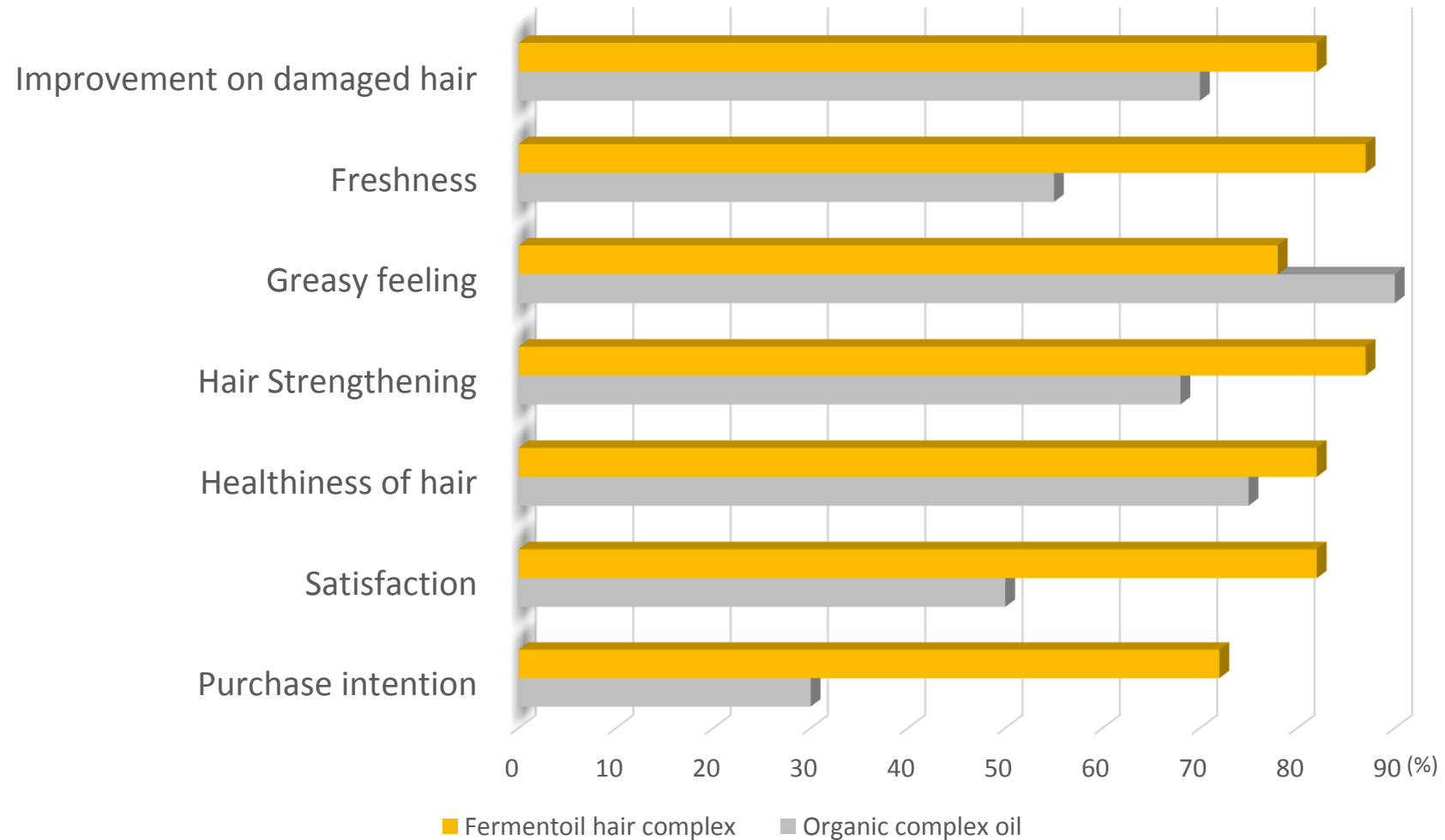






The hair tensile has been improved 24.3% after 4 weeks.

## Self assessment (Positive rates)



INCI	Pseudozyma Epicola/Prunus Amygdalus Dulcis (Sweet Almond) Oil/Camellia Japonica Seed Oil/Argania Spinosa Kernel Oil/Helianthus Annuus (Sunflower) Seed Oil/Camellia Sinensis seed Oil
CFDA	Candida bombicola/Glucose/Methyl Rapeseedate Ferment, Prunus Amygdalus Dulcis(Sweet Almond) Oil, Camellia Japonica Seed Oil, Argania Spinosa Kernerl Oil, ianthus Annuus(Sunflower) Seed Oil, Camellia Sinensis Seed oil
Definition	Contains five different Fermentoils (Argan, Green tea seed, Camellia seed, Sunflower seed and Sweet almond seed) which can enhance hair tensile with better texture and feeling.
Physical characteristics	Viscous Liquid (Light yellow to yellow)
Benefits & Uses	<ul style="list-style-type: none"> <li>① Anti-Frizz</li> <li>② Enhance hair tensile</li> <li>③ Prolong hair curl</li> <li>④ Less greasy feeling</li> </ul>
Application	Hair care
Recommended dosages	Up to 99%