# TECHNICAL DATA SHEET

## CosmeGreen ES1822+

CATALYST TECHNOLOGIES, INC.

SURFACTGREEN

Performing Surfactants from nature is our DNA

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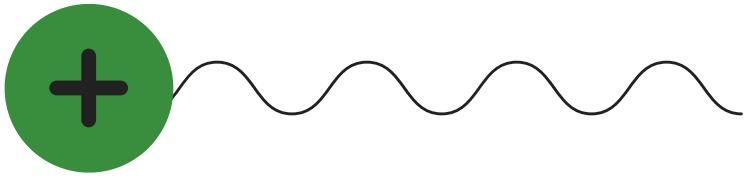
# CATIONIC SURFACTANT HAIR CARE CONDITIONER



Hydrophilic part from sugar beet

Hydrophobic part from rapeseed

**INCI : Arachidyl/Behenyl Betainate Esylate (and) Arachidyl/Behenyl Alcohol**

## CHARACTERISTICS

- Raw Materials 100% Biosourced
- Easy to formulate
- Recommended pH 3-5
- Adapted for Emulsion and Solid
- No competition with human food chain

## GREEN CHEMISTRY

- No solvent
- Palm oil free
- No waste
- Readily Biodegradable
- No danger pictogram
- One pot process and no waste

**Made in France**

**Certifications**

- COSMOS
- NATRUE

| | |
|---|---|
| Chain Length | C18-C22 |
| State | Pellets |
| % Active material | 20-35% |
| % Brassica alcohol | >60% |
| Melting point | 70-76°C |
| Colour | White – Light yellow |
| Smell | Neutral |
| Recommended pH | < 5 |
| % of use | 4-80% |
| Storage conditions | Cool and dry place |

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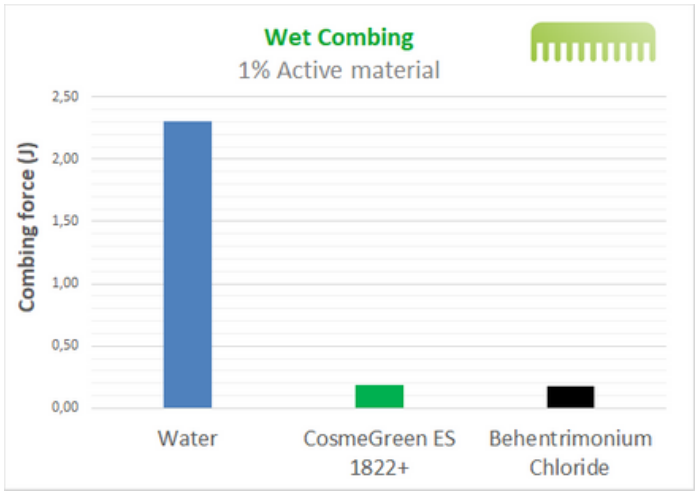
# COSMEGREEN ES1822+

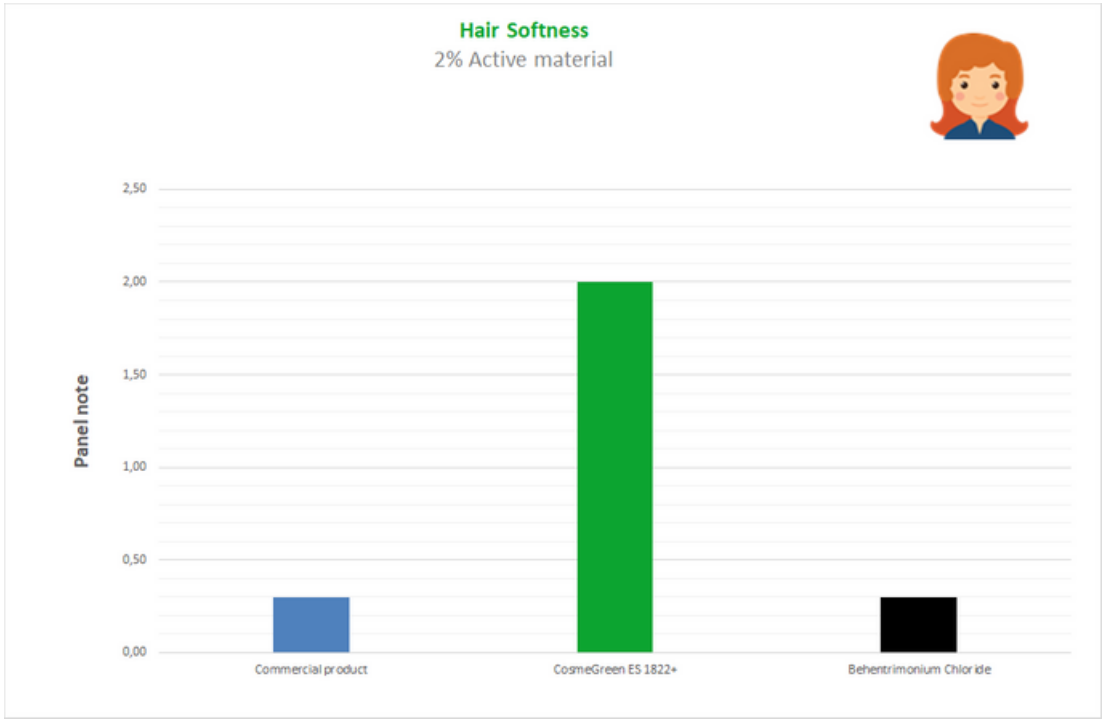
- Material readily biodegradable: 94% within 28 days (OECD 301B)
- Low ecotoxicity ingredient EC50 (48H) Daphnia (OECD 202) = 83,8 mg/L
- Natural origin index = 1, according to ISO 16128

## EFFICIENCY TESTS

*As effictive as behentrimonium chloride...*




*...and much softer*



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# O/W EMULSIFICATION PROCESS

## BUFFER SOLUTION: THE ESSENTIAL ALLY

| Buffer Solution | % m/m |
|---|---|
| Sodium Lactate | 31.5% (MA) |
| Lactic Acid | 18.5 (MA) |
| Water | Qsp 100% |
| **pH** | **4.3** |

For CosmeGreen ES1822+ to deliver its full performance, the environment must contain a lactic acid and sodium lactate buffer solution.

This buffer solution **must be added regardless of the pH conditions observed.**

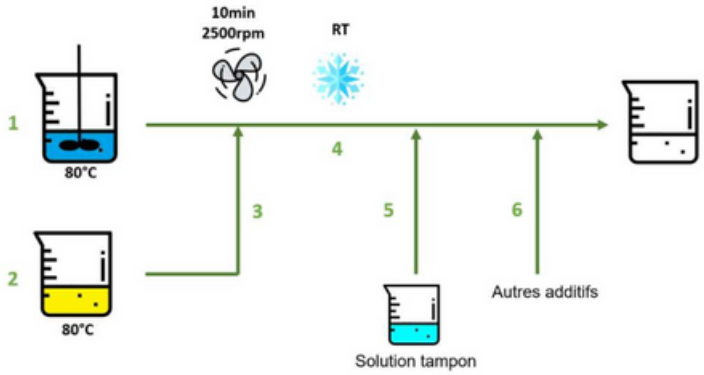

## COMPATIBILITIES

- Non-ionic polysaccharides, oils, silicones
- Sodium gluconate, Sodium lactate

## INCOMPATIBILITIES

- Xanthan gum, Sodium alginate, Cellulose gum
- Soda, Sodium citrate

## OPERATING MODE




1. Heat the aqueous phase to 80°C.
2. Incorporate the CosmeGreen ES1822+ in the fatty phase and heat to 80°C.
3. At 80°C, slowly add the oily phase to the aqeous phase, with strong stirring but avoiding the incorporation of air. Maintain stirring and temperature for 10min.
4. Cool to room temperature with gentle stirring.
5. Make a buffer solution from sodium lactate and lactic acid, and add 4% to the emulsion (regardless of pH).
6. Add preservatives, fragrance and other additives.

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# TECHNICAL DATA SHEET

## CosmeGreen MB1618

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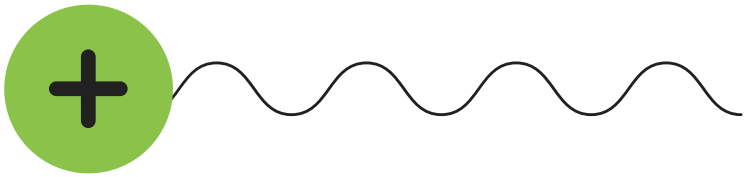
CATALYST TECHNOLOGIES, INC.

# CATIONIC SURFACTANT HAIR & SKIN CONDITIONING AGENT - GLYCINE BETAINE ESTER



Hydrophilic part from Sugar Beet

Hydrophobic part from Vegetable Oil

**INCI : Cetearyl Alcohol and Beta Vulgaris (Beet) Root Extract**

## CHARACTERISTICS

- 99% Bio-sourced
- Easy to Formulate
- Recommended pH 3-5
- Adapted for Emulsions and Solids
- No competition with human food chain

## GREEN CHEMISTRY

- No solvent
- RSPO Palm
- One Pot, No Waste Process
- Readily Biodegradable
- No GHS Warning Labels

**Made in France**

| | |
|---|---|
| Chain Length | C16-C18 |
| State | Pellets |
| % Active material | 25-35% |
| % Brassica alcohol | >60% |
| Melting point | 60-65°C |
| Colour | White – Light yellow |
| Smell | Neutral |
| Recommended pH | < 6 |
| % of use | 4-80% |
| Storage conditions | Cool and dry place |

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# COSMEGREEN MB1618

- Material readily biodegradable: 94% within 28 days (OECD 301B)
- Low ecotoxicity ingredient EC50 (48H) Daphnia (OECD 202) = 83,8 mg/L
- Natural origin index = 0,99 according to ISO 16128

# O/W EMULSIFICATION PROCESS

## BUFFER SOLUTION

| Buffer Solution | % m/m |
|---|---|
| Sodium Lactate | 31,5% (AM) |
| Lactic Acid | 18,5% (AM) |
| Water | to 100% |
| **pH** | **4,3** |

For maximum performance, the formula must contain a lactic acid and sodium lactate buffer solution. This buffer solution must be added regardless of the pH conditions observed.


## COMPATIBLE WITH

- Non-ionic polysaccharides, oils, silicones
- Sodium gluconate, Sodium lactate

## INCOMPATIBLE WITH

- Xanthan gum, Sodium alginate, Cellulose gum
- Soda, Sodium citrate

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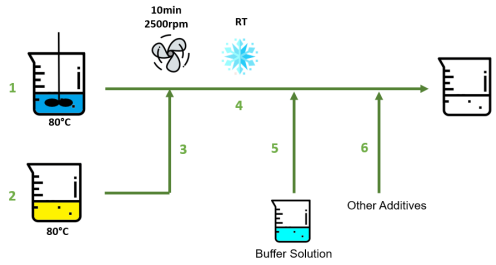
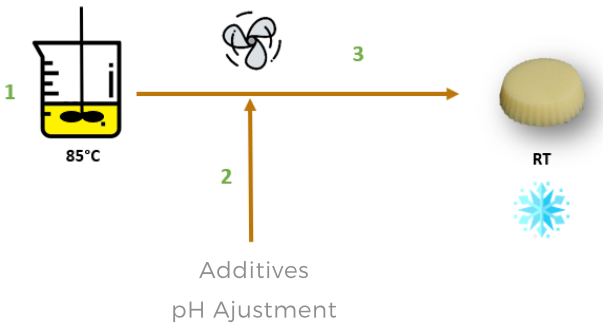
## MANUFACTERING METHOD - EMULSION




1.Heat the water phase to 80 C.
2. Add CosmeGreen MB1618 to the oily phase and heat to 80˚C.
3. At 80˚C, slowly add the oily phase to the water phase while strongly mixing. Avoid air getting into the mixture. Continue mixing at the same temperature for 10 minutes.
4. Cool to room temperature while gently stirring.
5. Make a buffer solution from sodium lactate and lactic acid. Add 4% to the emulsion (regardless of pH).
6. Add preservatives, fragrance and other additives.

## MANUFACTERING METHOD - EMULSION




1. Add all ingredients and heat to 85 C
2. Add the buffer solution while mixing
3. Pour the mixture into molds and let it cool

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