ProCondition™

Inolex

Sativa

INCI: Cannabisamidopropyl Dimethylamine

Formulator’s Guide

Contents

Use Levels and pH Requirement

Recommended Use Levels:

- Rinse-off conditioners: 1.0 – 5.0% (w/w)
- Leave-on hair products: 0.5 – 3.0% (w/w)
- Skincare emulsions: 0.2 – 5.0% (w/w)
- Surfactant systems: 0.5% (w/w)

pH Requirement:

- pH between 3.5 – 6.5 is required for all applications
- Always add the neutralizing acid to the water phase before adding ProCondition™ Sativa
- Suitable neutralizing agents: citric acid, lactic acid, aspartic acid, and glutamic acid

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Ingredient Compatibility

ProCondition™ Sativa is not compatible with anionic components such as:

- Anionic emulsifiers
- Anionic co-emulsifiers
- Anionic thickeners
- Anionic rheology modifiers or gums

Generally compatible with anionic surfactants when used at the recommended use level.

Low electrolyte levels are preferred. Electrolytes can negatively affect texture, viscosity, or stability.

Solvent-type preservatives may reduce viscosity and affect high temperature stability. Examples include:

- Phenoxyethanol
- Benzyl Alcohol
- Caprylyl Glycol

If viscosity is lower than desired, the following ingredient adjustments may help increase viscosity:

- Reduce level of glycols (e.g. propylene glycol or propanediol)
- Increase fatty alcohol levels
- Incorporate nonionic water-phase thickeners

Formulation Processing Instructions

Two Pot Process:

1. Heat the water phase to 75 – 80°C. Add neutralizing agent and water-soluble ingredients to the water phase. Mix until uniform.

2. Heat the oil phase to 75 – 80°C. Add oil soluble ingredients to the oil phase. Mix until uniform.

3. ProCondition™ Sativa can be added to the water phase or the oil phase. Mix until fully melted and uniform.

4. Add oil phase to water phase at 75 – 80°C and mix until uniform.
   NOTE: Homogenization can be used; recommended homogenization conditions are 3 minutes at 3000 rpm. Cool to approximately 65°C. Propeller mixing can begin as soon as homogenization has stopped.

5. Cool to approximately 50°C with medium speed propeller mixing.

6. Below 50°C mix slowly.
   NOTE: Low shear and slow mixing are necessary to create the lamellar gel network which provides emulsion viscosity and stability.

7. Final pH between 3.5 – 6.5 is required for emulsion stability.

Processing Notes:

- Homogenization is recommended to create a more uniform emulsion but is not a requirement.
- Phase transitions during cool down are normal. This is the set-up of the lamellar gel network which provides emulsion stability, structure, and viscosity.
- Lamellar gel network based formulations are processing dependent. The type of shear, when the shear is applied, the batch size, the cooling rate, and the order of addition of ingredients can all affect final viscosity and stability.
- If adding ProCondition™ Sativa to a surfactant system: add after the anionic surfactants, heat to 75 – 80°C and mix until uniform.

1

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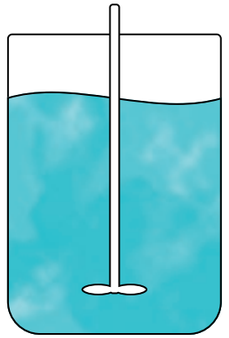
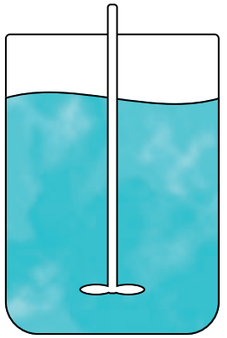


2

Heat the oil phase to 75 – 80°C. Add oil soluble ingredients to the oil phase. Mix until uniform.



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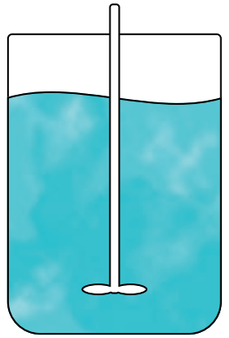

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Add oil phase to water phase at 75 – 80°C and mix until uniform.
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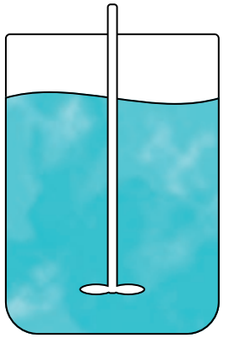
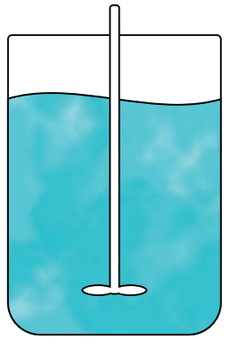


5

Cool to approximately 50°C with medium speed propeller mixing.

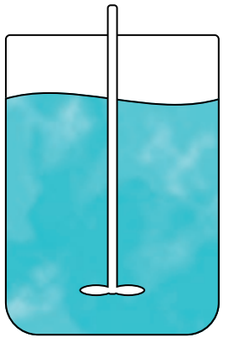


6

Below 50°C mix slowly.
NOTE: Low shear and slow mixing are necessary to create the lamellar gel network which provides emulsion viscosity and stability.

7

Final pH between 3.5 – 6.5 is required for emulsion stability.



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Formulation Processing Instructions

One Pot Process:

1. Heat the water phase to 75 – 80°C. Add neutralizing agent and water-soluble ingredients to the water phase. Mix until uniform.
2. Maintain temperature at 75 – 80°C and add ProCondition™ Sativa to the water phase with continuous mixing until fully melted.
3. Add oil phase ingredients, one at a time with continuous mixing.
4. Maintain temperature at 75 – 80°C and mix until uniform.
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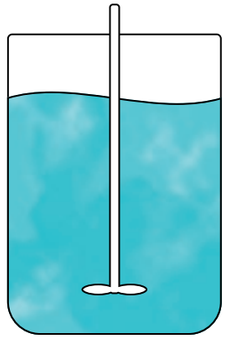

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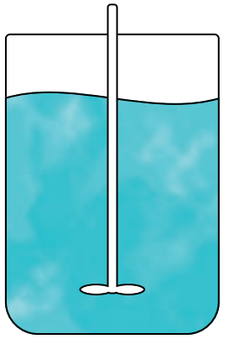

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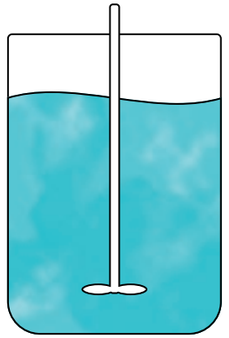

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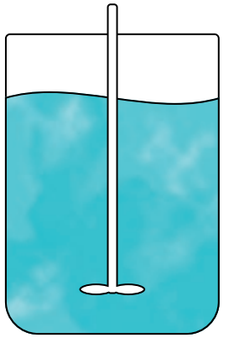

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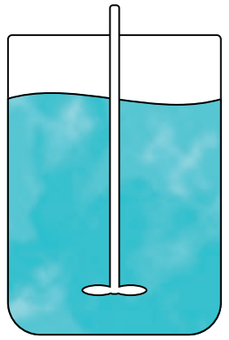

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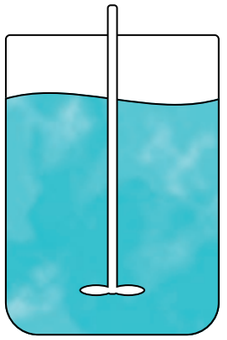

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Formulation Examples

HempHair Hydrating Shampoo (HC-1110)

This versatile shampoo provides a gentle yet deep clean that is safe for daily use on color treated hair. ProCondition™ Sativa boosts slip and glide imparted from emollients and natural oils.

SEE THE FORMULATION

HempHair Hydrating Conditioner (HC-1111)

A cannabis-derived ingredient is SECOND on the ingredient list of this excellent conditioner. ProCondition™ Sativa serves as the conditioning system and primary emulsifier. This formula is color-safe thanks to the color protection properties from LexFeel™ N350 MB.

SEE THE FORMULATION

SativaSkin Priming Serum with CBD (SC-1083)

But first, CBD... This multifunctional primer can be used a serum before additional moisturizers, as a makeup primer, and/or as a base under sunscreen. Prep your skincare routine with CBD and get a soft, dewy look.

SEE THE FORMULATION

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