



# Formulation

Name	<b>COLD MIX HAIR CONDITIONER</b>	
No.	804	
Description	STEPANQUAT® ML allows one to make hair conditioner at room temperature, resulting in savings in manufacturing time and energy.	
Formulation	<b>INGREDIENTS:</b>	<u>% by Weight</u>
	=== Phase 1 ===	
	Deionized Water	q.s. to 100
	Natrosol 250 HHRB (Hercules) Hydroxyethylcellulose	0.75
	=== Phase 2 ===	
	STEPANQUAT® ML	2.11
	Lipocol L (Lipo) Lauryl Alcohol	2.5
	Glycerin	0.5
	=== Phase 3 ===	
	Sodium Hydroxide, 50% solution	q.s.
	Citric Acid, 50% solution	q.s.
	Preservative, Dye, Fragrance	q.s.
	<b>Total</b>	<b>100.0</b>
Procedure	Prepare Phase 1 by dispersing Natrosol into water. Add Sodium Hydroxide to raise pH to 7.0-8.0. Mix for 30-35 minutes. When solution is clear of "fish-eyes," adjust pH with Citric Acid to a pH of 4.0-5.0. Add ingredients of Phase 2 to Phase 1. Mix well. If solution is not homogenous, heat to 30°C. Mix until homogeneous. Cool to room temperature. Adjust pH with ingredients from Phase 3, if necessary. Mix well. Add Preservative, Dye, and Fragrance as desired.	
Physical Properties	Appearance, at 25°C	Opaque lotion
	pH, as is	3.5 - 4.5
	Viscosity, at 25°C, cps	2500 - 3500
Storage/Stability	6 months at 25°C	Stable
	1 month at 42°C	Stable
	1 month at 50°C	Stable
Instructions for Use	Apply as a normal conditioner.	
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