

Leave-In Hair Conditioner Formulation

Phase	Ingredient	%	Function
A	Demineralized water	85.0%	Solvent
A	Cetearyl alcohol	1.5%	Thickener, co-emulsifier
A	Behentrimonium chloride	1.0%	Conditioner, cationic active
A	Glycerin	2.0%	Humectant
B	Phenyltrimethicone (PTM 20)	1.0%	Gloss, smoothness, moisture protection
B	Dimethicone	1.0%	Heat protection, slipperiness
B	Caprylic/Capric Triglyceride	2.0%	Emollient
C	Panthenol (Provitamin B5)	0.5%	Nourishing, moisturizing
C	Fragrance	0.3%	Perfume
C	Preservative (e.g. Geogard)	0.7%	Protection against micro-organisms
C	Citric acid (10% solution)	qs	pH adjustment (target: pH 4.0–4.5)

Processing instructions

1. Phase A: Heat water to 75–80°C. Add Cetearyl alcohol, BTAC and glycerine. Stir until homogeneous.
2. Phase B: Mix PTM 20, dimethicone and triglyceride. Add to phase A while stirring.
3. Allow the mixture to cool to below 40°C.
4. Add Phase C while stirring gently.
5. Check and correct the pH if necessary.