



# Personal Care Formulary

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## Volumizing Conditioning Shampoo – Sulfate Free

This clear shampoo has a short ingredient list and is very easy to formulate. The surfactant system PEL-SURF PHC-HV has been designed to be ultra-mild and to exhibit pH-controlled thickening properties. A thick and clear gel texture is obtained without any thickening polymer. This formulation provides a rich, tight foam and leaves the hair clean and light, with no build-up. It's ideal as volumizing shampoo for thin hair or for daily use before usual conditioner. Free from sulfates, PEG, dioxane and silicones.

Phase	Ingredients	Trade Name	Function	%
A	Water		Solvent	66.3
A	Water, Disodium Cocoamphodipropionate, Sodium C14-16 Olefin Sulfonate, Coconut Oil Aminoethoxyethanol Amides, Arginine Lauraminopropionate	PEL-SURF PHC-HV	Surfactant	28.0
A	Cocamidopropyl Hydroxysultaine	PEL-AMPH CBS-G	Foam enhancer Viscosity builder	3.0
B	Citric Acid	Citric Acid <sup>(1)</sup>	pH adjuster	0.6
C	Polyquaternium-7	DORIPOL PQ-7 <sup>(2)</sup>	Hair conditioning agent	2.0
C	Preservative		Preservative	q.s.
C	Fragrance		Fragrance	q.s.
C	Tetrasodium Glutamate Diacetate	TSGD <sup>(3)</sup>	Chelating agent, pH stabilizer	0.1

**Procedure:** (cold process):

Mix A ingredients at room temperature until clear and homogeneous.

Adjust pH with B (viscosity will increase). Add C in listed order. Mix well after each addition

**Results:** Appearance: transparent light yellow flowable gel

Color Gardner: 1.3

pH: 6.0-6.2

Viscosity: 6,720 cps @ 25°C

Stability, 8 weeks @ 25°C: pass

**Observation:** Lower or higher viscosities can be obtained simply by adjusting the concentration of PEL-SURF PHC-HV\*

in the 15-25% or 35-45% ranges, respectively; The final viscosity is highly dependent on the nature and concentration of the cationic hair conditioning agent.

\*: **Regulatory compliance:** PEL-SURF PHC-HV can be replaced by PEL-SURF PHC-HV2 to comply with Australian and Chinese National Inventories. See details below:

Trade Name	INCI Name	All components are registered/listed on:
PEL-SURF PHC-HV	Water, Disodium Cocoamphodipropionate, Sodium C14-16 Olefin Sulfonate, Coconut Oil Aminoethoxyethanol Amides, Arginine Lauraminopropionate	TSCA: Toxic Substances Control Act (USA) NDSL: Non-Domestic Substances List (Canada) IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
PEL-SURF PHC-HV2	Water, Disodium Cocoamphodipropionate, Sodium C14-16 Olefin Sulfonate, Cocamide MIPA, Arginine Lauraminopropionate	TSCA: Toxic Substances Control Act (USA) DSL: Domestic Substances List (Canada) NDSL: Non-Domestic Substances List (Canada) AICS: Australian Inventory of Chemical Substances IECSC: Inventory of Existing Chemical Substances Produced or Imported in China IECIC: Inventory of Existing Cosmetics Ingredients in China

(1): Kraft Chemicals; (2): Dorico Inc.; (3): Making Cosmetics #MH-U-032033 07M-SJ

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