

## Shampoo for Curly Hair

(Sample Recipe for Polyquaternium 10)

Shampoo for Curly Hair		
Phase A	Weight %	For 240 g /8.5 oz
Distilled Water (diluent)	40.5 %	116 g / 4.2 oz / 1/3 cup 3 Tbsp
Polyquaternium- 10 (conditioner)	0.5 %	1.2 g / 0.04 oz / 1/2 tsp
Phase B		
Alkyl Sulfonate (cleansing agent)	35 %	84 g / 3 oz / 1/3 cup
Coco Betaine (cleansing agent)	15 %	36 g / 1.3 oz / 2 1/2 Tbsp
Quaternium- 87 (conditioner)	3 %	7.2 g /0.3 oz / 1/2 Tbsp
PEG- 150 Distearate (thickener/emulsifier)	2 %	4.8 g / 0.2 oz / 1 3/4 tsp
PEG- 7 Glyceryl Cocoate (emulsifier/emollient)	2 %	4.8 g / 0.2 oz / 1 tsp
Cyclo- Dimethicone (emollient)	0.5 %	1.2 g / 0.04 oz / 1/2 tsp
Phase C		
Paraben- DU (preservative)	1 %	2.4 g / 0.1 oz 55 drops
Fragrance	0.5 %	1.2 g / 0.04 oz 25 drops
Method		
Add phase A into a disinfected glass beaker and mix the polyquaternium well until dissolved. Heat phase B to 150F/65C and melt the ingredients. Combine phase A and B and stir. When cool (below 100F/40C) add phase C and stir again.		
Properties		
The conditioners, polyquaternium- 10 and quaternium- 87 give a smooth appearance to the hair and improve wet comb and detangling. The surfactant combination is mild.		