



# Sulfate-free shampoo

Phase	Ingredient	Wt.%
A	Deionized water	33.82%
	Disodium EDTA	0.05%
	Sodium C14-16 olefin sulfonate	45.00%
	PEG-120 methyl glucose dioleate	1.50%
	<b>Zemea<sup>®</sup> propanediol</b>	<b>4.75%</b>
B	Cocamide MEA	3.00%
	Cocamidopropyl betaine	10.00%
C	Preservative	0.06%
	Glycol distearate	1.50%
D	Citric acid (20%)	0.32%
	Total	100.00%

## Procedure

1. Combine phase A and slowly mix at 75°C.
2. Slowly add phase B.
3. Mix at 75°C until uniform.
4. Cool to 25°C.
5. Add phase C and continue mixing.
6. Adjust pH to 6.0-6.5 with phase D.

## Product features

1. Less reduction in viscosity
2. High stability
3. Good foam height and drainage