LINCOLN FINE INGREDIENTS™	SOP MANUFACTURING PROCEDURE	PREPARED BY: P. HORNISH DATE: 11/10/14	WORK INSTRUCTION NO: N/A
	SUBJECT: MANUFACTURING OF In Shower Lotion		

Process Instructions for: In Shower Lotion

Batch Size: 1000 grams

APPARATUS/EQUIPMENT/CHEMICALS/SUPPLIES

Suitable beakers/containers
Mixer (variable mixing speeds)
Balance for weighing raw materials
Mixed Flow Impeller Mixing Blade (http://fawcettco.com/index.php?cPath=36_76) or a standard propeller mixing blade.
Hot Plate
Thermometer, °C
DI Water (78.22%)
Rheomer® 33T (Polyacrylates-33) (5.0%)
Petrolatum (7.50%)
Mineral Oil (4.50%)
Jaguar Optima (Guar Hydroxypropyltrimonium Chloride) (0.20%)
Stearyl Alcohol (1.0%)
Cetyl Alcohol (0.50%)
Alkamuls® SMO-UNBL (Sorbitan Oleate) (1.65%)
Alkamuls® PSMO-20 (Polysorbate 80) (1.35%)
Lincocide™ K (0.08%)
Fragrance (optional) (0.50%)
50% NaOH solution
50% Citric Acid solution

Manufacturing Process:

Note: This process is a two-step process: mixing an aqueous phase with an oil phase. Mixing and pH are critical to the rheology of the batch.

1) Using a suitable beaker, weigh **782.20g of DI Water** into a beaker. Begin to heat the water to 80°C. Add **50.0g of Rheomer® 33T** and mix with moderate speed. Adjust the **DI Water/ Rheomer® 33T** solution to a pH of 5.5 – 6.0. Continue heating to 80°C.

2) In a separate beaker, add **45.00g of Mineral Oil**, **75.00g of Petrolatum**, **10.00g of Stearyl Alcohol** and **5.00g of Cetyl Alcohol**. Heat on a hot plate using medium heat, until the raw materials are melted. Keep warm until needed.

3) Add **16.50g of Alkamuls® SMO-UNBL** and **13.50g of Alkamuls® PSMO-20** to the water phase. Continue heating the water phase to 80°C.

4) Add **2.00g of Jaquar® Optima** to the oil phase. Disperse by mixing by hand. Once the **Jaquar® Optima** is dispersed in the oil phase and the water phase is at the required temperature (80°C), add the oil phase to the water phase and mix for 30 minutes. Continue to mix the batch at a moderate speed.

   Note: Do not allow the Jaquar® Optima to settle to the bottom of the oil phase when adding the oil phase to the water phase. Mix the oil phase right before addition to the water phase.

5) Begin to cool the batch down.

6) Once the temperature of the batch is below 35°C, add in 0.80g of Lincocide™ K and mix until uniform. (Note: if the viscosity and pH are off at the end of mixing the batch, allow the batch to sit overnight and check the pH and viscosity the following day. Mix and adjust the pH accordingly.)