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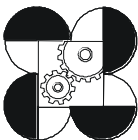
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Livelihood Technology Series 20

Formulation of HAIR SHAMPOO



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‘Our Business is Industry...’

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Formulation of Hair Shampoo

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PRODUCTION OF HAIR SHAMPOO

INTRODUCTION

A shampoo is a special cleanser for the hair and scalp. It is basically a solution of a detergent modified by additives to render it easier to apply and to safeguard against deterioration of the hair condition after the shampoo has been rinsed away. Washing of the hair and scalp has become a near universal practice; even some Third World populations consume a significant amount of shampoo.

Shampoos are the most used of hair-care products and probably represent the highest unit sales of any personal care product. Unlike soaps, synthetic detergent-based shampoos are relatively insensitive to hard water, making possible efficient rinsing with no scum-like residues.

For the year 2004, total sales for regular shampoos amounted to US\$ 988 million according to the Information Resources, Inc. (IRI), Chicago. Moreover, total sales for dandruff shampoo amounted to US\$ 237.1 million. (Happi, 2004)

FORMULATIONS

TRANSPARENT SHAMPOO

Ingredients

Coconut diethanolamide (CDEA)	20.0	g
Sodium lauryl ether sulfate (SLES)	30.0	g
Methyl paraben	0.25	g
Propyl paraben	0.25	g
Coco betaine	12.50	g
Sodium chloride, technical grade (salt)	2.50	g
Deionized water, fragrance, dye & citric acid solution	q.s. 250	ml
	(184.5	ml)

Equipment/Tools

Weighing balance
Mixing container, 400-mL capacity
Plastic container, 50-mL capacity
Wood chopsticks/stirring rod
pH paper, 0-14
Polyethylene bottle clear, 250 mL

Procedure

1. Weigh ingredients in separate containers.
2. Prepare 50% citric acid solution (50 g citric acid in 50 mL deionized water) and 1% dye solution (1 g of dye in 99 mL water), separately.
3. Dissolve methyl paraben and propyl paraben in CDEA.
4. Dissolve salt in 25 mL deionized water (from 184.5 ml).
5. Add salt solution to SLES. Mix well.
6. Add coco betaine and CDEA mixture to SLES mixture. Mix thoroughly.
7. Add dye solution to remaining deionized water.
8. Add water with dye gradually with mixing.
9. Add fragrance (0.1 – 0.2%).
10. Adjust pH to 5.5 – 6.5 with citric acid solution using pH paper when bubbles have subsided.
11. Pack in 250 mL plastic container and label properly.
12. Set aside citric acid solution and dye solution for future use.

PEARLIZED SHAMPOO

Ingredients

Euperlan PK 771	7.50	g
Coconut diethanolamide (CDEA)	10.00	g
Sodium lauryl ether sulfate (SLES)	32.50	g
Methyl paraben	0.25	g
Propyl paraben	0.25	g
Coco betaine	12.50	g
Sodium chloride, technical grade (salt)	2.50	g
Distilled water, fragrance, dye & citric acid solution	q.s. 250	ml
	(184.5	ml)

Equipment/Tools

Weighing balance
Mixing container, 400-mL capacity
Plastic container, 50-mL capacity
Wood chopsticks/stirring rod
pH paper, 0-14
Polyethylene bottle clear, 250 ml

Procedure

1. Weigh ingredients in separate containers.
2. Dissolve methyl paraben and propyl paraben in CDEA.
3. Dissolve salt in 25 mL water (from 184.5 mL deionized water).
4. Add Euperlan PK 771 to SLES. Mix well. Add salt solution gradually with stirring to SLES.
5. Add coco betaine and CDEA mixture to SLES mixture. Mix thoroughly.
6. Add dye solution if desired in remaining deionized water.
7. Add deionized water gradually with mixing.
8. Add fragrance (0.1 – 0.2%).
9. Adjust pH to 5.5 – 6.5 with citric acid solution using pH paper when bubbles have subsided.
10. Pack in 250 mL plastic container and label properly.

LIST OF SUPPLIERS

NAME OF COMPANY	ADDRESS/TELEPHONE #	PRODUCTS
Allysons' Chemical Enterprises	1425-1435 Araneta Ave., QC Tel. # 712-2266	chemicals, scents & containers
Eurochemicals, Inc.	L2, Arty II Subd., Mindanao Ave. Quezon City Tel. # 930-4715/930-0720 loc. 209	plant extracts, active ingredients & scents
Henkel, Phils. Inc.	3/F Alabang Business Tower 1216 Acacia Ave., Madrigal Bus. Park, Ayala-Alabang, Munt. City Tel. #s 807-6992 to 98	chemicals in bulk (min. of 20 kg)
Himmel Industries	6/F Allied Bank Center Bldg. Ayala Avenue, Makati City Tel. # 818-8411 loc. 4247	fragrances & essential oils
Medical Plastics (GL Plastic Pckg. Center)	1614 Yuseco St. cor. Rizal Ave. Sta. Cruz, Manila Tel. #s 711-0352	plastic container
Consolidated Copolypack Corp.	24 Madison St., Mand. City Tel#s 631-8331 to 34/632-0894 to 95	plastic containers
Theo-Pam Trading Corp.	2818 P. Celle Street, Pasay City Tel. #s 831-6463/831-4808 Fax # 831-4040	glasswares
Harnwell Chemicals Corp.	4172 Ponte Street, Makati City Tel. # 89704016/897-4014 Fax # 896-5161	glasswares
Yana Chemodities	151 Kaliraya Street, Quezon City Tel. #s 732-0163/731-3633/712-2821/732-2329 Fax # 732-0171	glasswares
Wilvero Enterprises	1704 Pampanga St., Sta. Cruz, Manila ° Telefax 731-6347	chemicals & scents