

# ROLIG



- a presentation on the next greatest deep cleansing solution -  
by Erick, Caleb, Rama, and Patrick

# **ROLIG: Soap and Package Design**

# Soap Packaging Design



## WHY ROLIG?

### **ENVIRONMENTALLY-FRIENDLY INGREDIENTS:**

- CRISCO OIL
- WATER
- SAND
- COCONUT OIL
- CANOLA OIL
- SODIUM HYDROXIDE
- EGG YOLK
- FRAGRANCE OIL
- NATURAL SOAP DYE

What started out as the product of a mere school experiment soon became a world-class soap paradigm.

With a blend of 3 natural oils, ROLIG excels in the qualities of cleansing, conditioning and moisturizing. Unlike regular soaps in today's market, we've also included sand and yolk to intensify the skin pore cleaning experience. Nonetheless, when you get ROLIG, expect only the best.

# **ROLIG: Marketing**

# Why Buy From Our Brand?

- Focusing on environmentally-friendly soap manufacturing ingredients and methods
- Cold Processing > Other Processing Methods
  - Creamy Lather and Moisturizing Results
  - Effective skin penetration and moisturization
  - Oil Property Preservation
  - Cleaner for Environment
- Biodegradable and cost-friendly soap packaging



# ROLIG VS Everyone Else - *EFFECTIVE INGREDIENTS*

## Dove Bar Soap Ingredients

### Sodium Lauroyl Isethionate

- Uses: According to DCI it is used as a detergent, wetting agent, and emulsifier
- About This Ingredient: This is a synthetic detergent. It **may dry the skin out** because of its degreasing properties.

Depending on where you look, this detergent may be listed as a

**mild skin irritant.**

- How It's Made: This detergent is chemically synthesized in a lab.
- Summary: This Dove soap ingredient **does not appear to have any beneficial properties** for your skin (aside from cleaning it), and may dry it out<sup>1</sup>

## ROLIG Ingredients

**DOES NOT USE ANY FORM OF DETERGENTS, only all-natural oils and ingredients that will still remove excessive skin oils while enhancing the soap application experience.**

# ROLIG VS Everyone Else - *QUALITY PRESERVATION*

Dove Bar Soap Ingredients	ROLIG Ingredients
<p>After saponification, commercial soap manufacturers, such as Dove, <b>make it a practice to remove the production of glycerine from their soaps</b> and are then applied to other products such as moisturizers</p>	<p><b>After saponification, glycerine is kept within the soap mixture, preserving the natural moisturizing property of our soap</b></p>

# ROLIG VS Everyone Else - *TRUST*

Dove Bar Soap Ingredients	ROLIG Ingredients
<p>Dove Bar Soap often uses <b>unknown chemically synthesized ingredients</b> or are even <b>potential allergens</b></p> <p>EX: Tetrasodium EDTA</p> <ul style="list-style-type: none"><li>• Uses: Used as a preservative and chelating agent, according to <a href="#">wikipedia</a>.<ul style="list-style-type: none"><li>• About This Ingredient: No known toxicity to the skin.</li><li>• How It's Made: <b>Synthesized in a lab.</b></li><li>• Summary: This ingredient <b>does not appear to have any beneficial properties for your skin</b><sup>1</sup></li></ul></li></ul>	<p>ROLIG fully discloses all ingredients and their effectiveness/purpose to customers to let them know ahead of time. As a brand, we want to spread awareness on what's actually going onto your skin and whether its safe or not.</p>



# Why Buy The Product

- Rough Sand Texture
- Egg Yolk acts as effective conditioner that moisturizes and creates a lathering experience through its vitamins and proteins
- 2-1 Yolk-Sand Combo
  - Sand opens and cleans out the skin pores
  - Egg yolk's special protein called albumin then tightens the pores



# Target Market / Market Niche

- Behavioral Segmentation: Customers who are looking or focusing on a deep pore cleansing skin solution
- Demographic Segmentation: Customers that travel often (more so for vacationers) at resorts or naturalistic destinations
  - Relaxation fragrance and application experience
  - Brand Name and Environmentally-friendly approach
  - Foreign Soap name

# **ROLIG:** Soap Statistics

# Ingredients

- **Crisco Oil**
  - High Creaminess Factor
- **Canola oil**
  - High Conditioning Factor
- **Coconut Oil**
  - High Hardness Factor, as well as it being one of few oils that have the cleansing factor and bubbly lather factor
- **NaOH**
  - This lye is used to produce hard soap. KOH is used to make liquid soap

# Ingredients

- **Egg**
  - Tighten the pores which will prevent dirt and grime from entering your pores.
- **Sand**
  - It collects, traps and removes impurities and grease within your skin pores
- **Fragrance**
  - To give the soap a beachy smell because soap by itself can smell bad
- **Soap Colouring**
  - To make the soap more original by splitting the soap into two different colours. One side is blue other is yellow. Blue for the beach and yellow for the sand.

# Options and Iterations

- Since canola oil has similar properties to vegetable oil. Another way we could have made our soap was by using vegetable oil. This could replace the conditioning factor for the soap
- We could have also used Ghee oil instead of Coconut oil because it too has a high contribution in making the soap hard and it also accounts for the cleansing and bubbly lather factor that will be removed if coconut oil is not used.
- We could also change crisco oil with avocado oil. It has similar contributions to the soaps hardness, creamy lather and conditions as crisco oil does.

- The soap calculator calculates the hardness, creamy lather, bubbly lather, conditioning and the cost of a soap be based on the types of oils is being used. It is also dependent on how many grams of soap you are making

N	O	P	Q	R	S	T	U	V
Contribution to Overall Soap Qualities								
SAP NaOH	SAP KOH	Hardness	Cleansing	Bubbly Lather	Creamy Lather	Conditioning	Cost	
32.025	44.975	27.65	23.45	23.45	4.2	3.5	3.100543478	
0	0	0	0	0	0	0	0	
30.825	43.2	11.7	0	0	11.7	31.5	1.166666667	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
13.3	18.6	1.2	0	0	1.2	18.2	0.22826087	
Mass of Oils (g)	500							
Percentage of Water as a Percentage of Oils	38%							
Mass of Water (g)	190							
Mass of NaOH (g)	Mass of KOH (g)	Hardness	Cleansing	Bubbly Lather	Creamy Lather	Conditioning	Cost	
76.15	106.775	40.55	23.45	23.45	17.1	53.2	4.495471014	
Totals	72.3425	101.43625						
Totals (leaving 5% super fat)								
	Recommended Ranges	29-54	12-22	14-46	16-48	44-69		
	Targets	40.55	23.45	23.45	17.1	53.2		
	Objective Function	20.20925964						

# Soap Calculator

	A	B	C	D	E	F	G	H	I	J	K
4	Oil	SAP - NaOH	SAP - KOH	Lauric	Linoleic	Linolenic	Myristic	Oleic	Palmitic	Ricinoleic	Stearic
5	Coconut Oil, 76 deg		0.183	0.257	48	2	0	19	8	9	0
6	Ghee, any bovine		0.162	0.227	4	2	1	11	19	28	0
7	Crisco, old		0.137	0.192	0	52	0	0	18	13	0
8	Avocado Oil		0.133	0.186	0	12	0	0	58	20	0
9	Olive Oil		0.135	0.19	0	12	1	0	69	14	0
10	Sesame Oil		0.134	0.188	0	43	0	0	40	10	0
11	Corn Oil		0.137	0.192	0	51	1	0	32	12	0
12	Grapeseed Oil		0.129	0.181	0	68	0	0	20	8	0
13	Sunflower Oil		0.135	0.189	0	70	1	0	16	7	0
14	Canola Oil		0.133	0.186	0	21	9	0	61	4	0

- The hardness factor is based on how much lauric, myristic, palmitic and stearic acid an oil has.
- The cleansing is based on how much lauric and myristic acid there is
- The bubbly lather is related to how much lauric, myristic and ricinoleic acid an oil contains
- The creamy lather correlates to the oils palmitic, ricinoleic and stearic acid quantities
- Lastly the conditioning factor is based on the sum of linoleic, linolenic, oleic and ricinoleic acid an oil has



# Soap Calculator

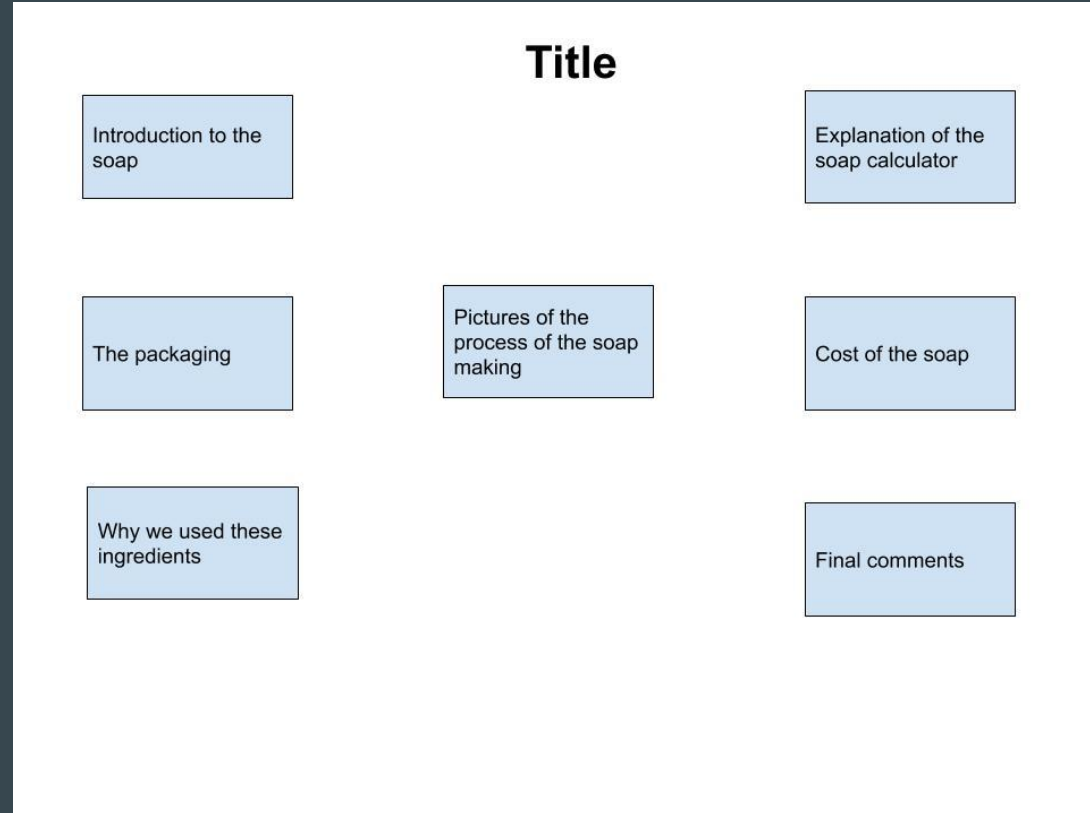
- The amount of hardness that a soap contains is obtained by multiplying the hardness by the mass of one oil used then dividing by the total mass of all oils. This is done for each oil used and then summed up to find the total hardness of the soap.
- This is also done for the soaps bubbly lather, creamy lather, conditioning and cleansing
- The amount of lye that is needed for each oil is found by multiplying the SAP of lye based on the oil with the mass of the oil. Then the values are summed up to find the total amount of lye needed
- Lastly, water is needed to make soap and the amount that is needed is found by multiplying the total mass with the percentage of Water as a Percentage of Oils

# Soap Calculator: Designed vs Made

- Our soap theoretically should weigh to 500 g
- However, due to errors and the samples given to be marked, our soap weighted to 444.5 g.
- The samples could have weighted around 40 - 45 g. Which means that around 10.5 to 15.5 of the mass was not included into the final soap
  - This could have been due to measuring errors of the oils and lye
  - Residues of the soap were left in the mixing pot and on the mold
  - There was evaporation during the saponification

# Layout of the Board

- This is just the layout of what to poster could possibly look like
- Not 100% finalized, things could change



# Cost of Ingredients (in order of amount used)

Crisco oil (225g) - \$1.17

Distilled water (190g) - \$0.09

Coconut oil (175g) - \$3.10

Canola oil (100g) - \$0.23

NaOH lye (72.34g) - \$2.16

Sand (40g) - \$0.02

Egg yolk (18g) - \$0.27

Fragrance oil (15g) - \$10.00

Soap dye (8g) - \$2.24

**Total Cost (843.34g) : \$19.28**

**Price per gram (1g) : \$0.023/g**

**Price per bar (65.6g) : \$1.574**

# Cost of packaging

Wax paper packaging ( $576 \text{ cm}^2$ ) - \$0.045 per soap bar

Paper Label (Paper Portion)-\$0.00304 per soap bar

Paper Label (Colour/Black Ink Portion)-\$0.00141 per soap bar

**Total Packaging Cost : \$0.0494**

**Total Cost (soap bar + packaging) : \$1.6234**

# Price Point

We included materials, labour, transportation, and other factors in our price markup.

**Market Price Before Tax: \$4.15 (155.6% Markup from base materials)**

# Environmental Cost of Ingredients and Packaging

- Wax paper packaging is completely biodegradable!
- The NaOH used as a saponifying agent is an excellent use of a chlorine production by-product!
- Sand is abundant and is easily reintegrated into nature!
- The oils and fragrances used have no direct impact on the environment!

# Bibliography

<sup>1</sup> Dove Ingredients Explained. (n.d.). Retrieved from <https://www.alabu.com/dove-ingredients/>.