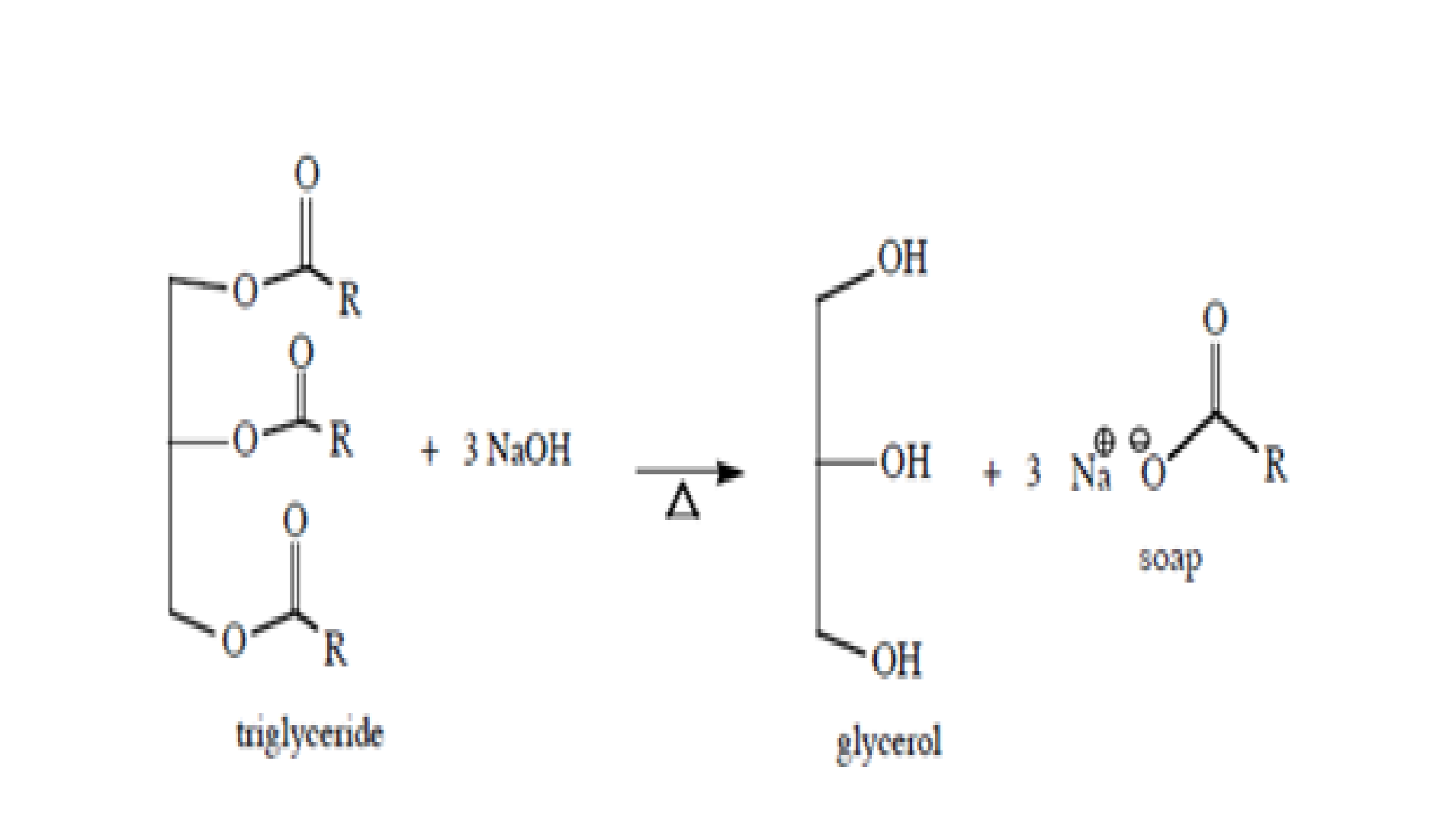


SOAP-MAKING CHEMISTRY



SAPONIFICATION

- An alkaline solution is mixed with oils to produce a fatty salt (soap) and glycerin.

DESIGN CONSTRAINTS AND CRITERIA

CONSTRAINTS

- Economic soap production using quality materials
- Minimal soap production time
- Target a set of soap properties that the product should have

CRITERIA

- Soap should be gentle on the hands and conditioning to the skin
- Soap should be adequately cleansing, lathering
- Soap should be affordable

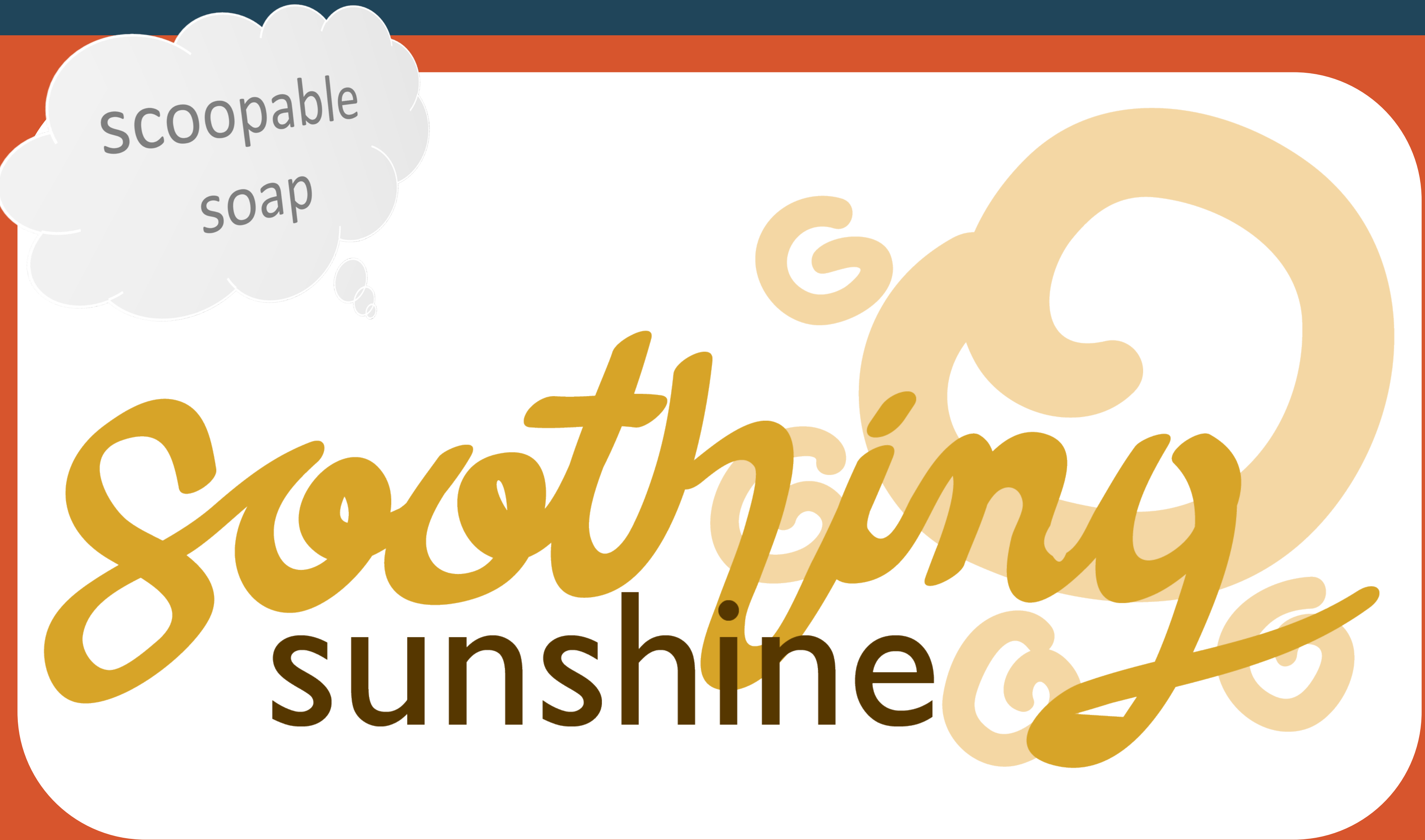
MOLD SELECTION



- The mold was selected due to its durability, nonreactive composition and safety.

PACKAGING AND SAFETY FEATURES

- Packaging uses motifs reminiscent of ice cream tubs to emphasize the creaminess
 - Horizontal stripes
 - Bright colours
 - Spoon
- Packaging includes safety warning (for external use only)
- High superfat percentage is inherently safer
- No soap tray needed



- SOOTHES DRY SKIN
- COMBATS ACNE
- SUN DAMAGE AND AGING PROTECTION
- ANTI-INFLAMMATORY
- SOURCE OF MULTIPLE MINERALS

3.99

OUR SOAP INGREDIENTS

CRISCO

- Brings lathery effect to the soap
- Brings hardness to the soap

OLIVE OIL

- Contributes to soap’s creamy lather
- Moisturizing effect to the soap

COCONUT OIL

- Brings bubbly lather to the soap
- Moisturizing and conditioning effect to the soap

CANOLA OIL

- Improves creamy lather and moisturizing effect in the soap

GHEE

- Contributes to soap’s creamy lather
- Brings hardness to the soap

TURMERIC

- Gives soap a pleasing brown colour
- Has soothing and medicinal properties

SOAP ITERATIONS

PAPRIKA

- Gives soap a natural red colour
- Anti-inflammatory properties
- Less beneficial properties than turmeric

LOWER SUPERFAT PERCENTAGE

- A harder soap recipe
- More drying to the hands

SOAP CALCULATOR

Oil	Quantity (g)	Percentage
Coconut Oil	75	15%
Ghee	100	20%
Crisco	150	30%
Avocado Oil	0	0%
Olive Oil	25	5%
Sesame Oil	0	0%
Corn Oil	0	0%
Grapeseed Oil	0	0%
Sunflower Oil	0	0%
Canola Oil	150	30%
Mass of Oils	500	100%
Mass KOH	103.425	73.8%
With superfat	0	0%
Mass pigment	5	

SOAP CALCULATOR BASIS

ECONOMICS

- PRICE PER BAR = 3.99\$
Based on 85g bar of soap
Average price of 100g bar of homemade soap online = 6.00\$
Average price per g of homemade bar online = 0.06\$
Average profit margin per gram online =0 .04\$
- COST TO PRODUCE BAR = 0.50\$
Cost of materials per bar = 0.45\$
Cost of packaging per bar = 0.05\$