Owed Soap: Soapmaking Guide

Overview

This guide will walk you through the process of making cold-process soap using **used cooking oil**. You'll learn how to clean your oil, calculate your recipe using SoapCalc, safely handle lye, and recognize the right "trace" before pouring into a mold.

Ingredients & Supplies

Ingredients:

- **Used cooking oil** (vegetable oil preferred, filtered)
- **Sodium hydroxide (lye)**
- **Water**
- Essential oils (lavender, tea tree, etc.)

Equipment:

- Digital scale
- Immersion blender or whisk
- Heat-safe containers (stainless steel, plastic #5, or tempered glass)
- Thermometer
- Soap mold (can use silicone baking molds or DIY box lined with parchment)
- Gloves, goggles, masks, and long sleeves (for lye safety)

Step 1: Clean & Prepare Used Oil

When using used oil, begin by straining out any large food particles or debris.
The soapmaking process, especially the lye, helps break down impurities and acts as a disinfectant — making the final soap safe and clean for use.

1. **Strain the oil** through a fine mesh or cheesecloth to remove food particles.
2. Store in a clean, dry container.

   Ex. In the image below, there are no visible food colors and the oil looks generally clean

Step 2: Calculate Your Soap Recipe

Use SoapCalc to safely calculate how much **lye** and **water** you need.

How to use SoapCalc:

1. Go to **soapcalc.net** and choose "Soap Calculator."
2. **Choose your oil**: Input "Used Vegetable Oil" or a mix of oils if known.
3. **Enter weight of oil** (in grams or ounces).
4. Set your **lye type** to **NaOH** (for bar soap).
5. Set **superfat** to 5% (recommended for mildness).
6. Set **Lye Concentration** to 30% (a safe standard).
7. Click "Calculate Recipe" → "View or Print Recipe."

*** **Important:** Always measure lye and water by **weight**, not volume.

Step 3: Lye Safety First

- Work in a **well-ventilated area** (open windows/outdoors)
- Wear **goggles**, **gloves**, **masks,** and **long sleeves**.
- Always **add lye to water**, **never water to lye** – it can erupt dangerously.

Mixing:

1. **<u>Slowly</u>** sprinkle lye into distilled water while stirring
   ***This causes an exothermic reaction, meaning the solution will heat up quickly — often approaching boiling temperatures. Always add lye to water, never the other way around, as adding water to lye can cause a dangerous eruption or splashing.

2. It will heat up — let cool to about **100–120°F**
   ***If mixing it without an emulsion blender, can be hotter up to **130°F**

Step 4: Mixing Oil & Lye Solution

1. Slowly pour lye water into oil while mixing.

2. Use an immersion blender (or whisk) to blend until **"trace"** is reached.

What is "trace"?

Trace is when the soap batter thickens and leaves a faint trail on the surface when drizzled from a spoon or spatula — like pudding or cake batter.

Ex. As seen from the image below, you can see the thickened lines clearly. When making soap for the first time, the batter should be thicker for less inconsistencies for the soap.

Step 5: Add Extras

Once trace is reached, add essential oils

Mix gently to combine.

Step 6: Pour & Cure

1. Pour the soap batter into your mold.
2. Tap mold to remove air bubbles.
3. Let the soaps rest (for 48–72 hrs)
   ***Make sure the soaps are in a well ventilated area away from the sun
4. After 48-72 hrs, unmold and slice soap if needed.
5. Let bars **cure for 4–6 weeks** in a dry, ventilated space.

Final Tips

- Label your soaps with the **date made**.
- Don't handle or use until **fully cured** (pH should be around 8–9).

- Test pH with pH strips or touch lightly — it should feel like normal soap, not slimy or irritating.
- Use a recipe notebook to track ingredients and adjustments.