Biology A · Unit 3 · Level 2

Making & Burning Biodiesel (Observer Jobs)



TODAY'S PLAN

- 👥 Jobs
- ⚠️ Safety
- 🌱 Steps
- ✅ Check
- 📝 Reflect

Get ready

Jobs



Timer

Starts the timer: 10 minutes of shaking (Day 1), 5 minutes of burning (Day 2). Calls out the time.



Recorder

Writes the oil color, thickness, and the water temperatures in the table.



Photo taker

Takes a photo before and after: oil, two layers, the flame (from a safe spot).



Color checker

Says what color the oil and biodiesel are, and if there are 2 layers.

Safety

Be Safe



🥽 Goggles on the whole lab. Stay behind the safety line.

🧪 Methanol and potassium hydroxide are poison and burn skin. Only the teacher touches them.

🔥 Only the teacher lights and puts out the flame. Long hair tied back.

🧼 Wash hands after the lab. No food or drinks at the lab table.

Steps

Steps 1 of 2



1. 🌻 **Observe** the canola oil: color, thickness, smell (wave the air to your nose).
2. 🧪 **Watch** the teacher add methanol and the catalyst (teacher only).
3. ⏱️ **Time** 10 minutes of shaking. Record.
4. 🥞 **Day 2**: record the 2 layers. Biodiesel is on top, glycerol on the bottom.

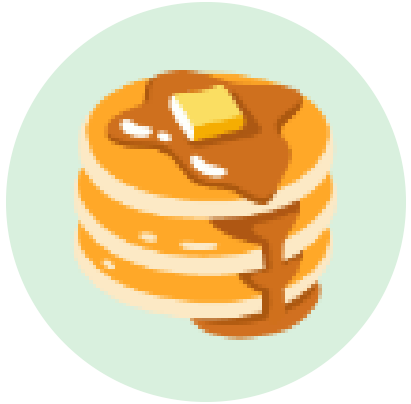
Steps

Steps 2 of 2



1. 🌡️ **Record** the start temperature of the water in the can.
2. 🔥 **Watch** the biodiesel burn for 5 minutes (teacher lights it).
3. 🌡️ **Record** the highest water temperature. Find the change.
4. 📝 **Answer**: what forms of energy did you see? (chemical → heat and light)

🃏 Check 1 of 2



Which layer is the biodiesel?

Hold up 1, 2, or 3:

1️⃣ The top layer

2️⃣ The bottom layer

3️⃣ There is no layer



The top layer

Biodiesel floats on top; glycerol sinks.

🃏 Check 2 of 2



When biodiesel burns, chemical energy changes into…

Hold up 1, 2, or 3:

1️⃣ Matter

2️⃣ Sound only

3️⃣ Heat and light

✅ Answer · Card 2 of 2



Heat and light

Chemical → thermal (heat) + light.

Wrap-Up

Clean Up + Reflect



- 🥽 Goggles back
- 🧼 Wash hands
- 📝 Finish the data table and reflection