Reagent Name	Reqd. PPE	Critical Safety Hazards	Reactivity	Disposal
Limonene	Standard	Skin hazard, inhalation hazard, environmental hazard	Flammable	Hazardous Waste
Methanol	Standard	Toxic	Flammable	Hazardous Waste

Procedure:

Gathering materials

Preparation of Standard

1. Pour roughly 1 mL of (R)-(+)-Limonene (Sigma-Aldrich, catalog number 183164) into a 5 mL beaker.
2. Pour roughly 75 mL of methanol into a 100 mL beaker
3. Using a P200, transfer 200 µL of the limonene from the beaker into a 10 mL volumetric flask.
4. Fill the volumetric flask to the mark with methanol.
5. Obtain a 5 mL beaker and pour about 1 mL of this dilution.
6. Using a P200, transfer 153 µL of the dilution from the beaker into a 25 mL volumetric flask. Label this flask "S100".
7. Mix "S100" by 20x inversion.
8. Gather four 10 mL volumetric flasks and stoppers. Label them "S50", "S25", "S12.5", and "S6.25" (corresponding to their concentrations in µg/mL)
9. Obtain a 5 mL volumetric pipette and bulb.
10. Transfer 5 mL of methanol into each of the four volumetric flasks, placing a stopper on each immediately after to avoid evaporation.
11. Use a transfer pipette to fill the "S50" flask to the mark with the contents of the "S100" flask.
12. Mix "S50" by 20x inversion.
13. Use a new transfer pipette to fill the "S25" flask to the mark with "S50", and mix by inversion. Repeat this process to create the other two standards.

Extraction of Limonene from Fruit

1. Gather three 7 mL vials. Label as "G", "O", and "L" (for grapefruit, orange, and lemon).
2. Using a razor blade, collect a piece of the rind of a grapefruit, lemon, and orange around a fingerprint size in area. Ensure that the none of the white flesh is included in the sample.
3. From each rind piece, mass and record a roughly 0.1 g sample.
4. Place this rind piece in the appropriate vial.
5. Transfer 5 mL of methanol into each vial.
6. Shake each vial vigorously for 5 minutes, then let each vial rest for 5 minutes.
7. Using a P500, transfer