



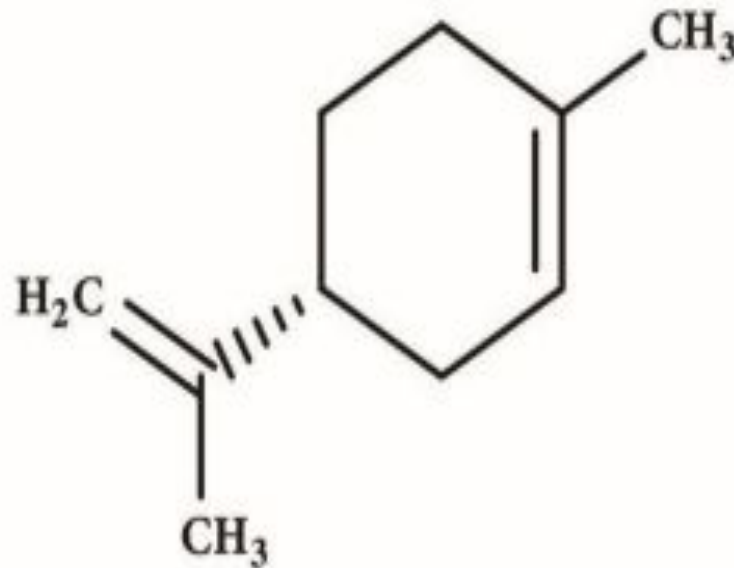
Students 2 Science

EMPOWERING STUDENTS TO SUCCEED WITH STEM

Limonene

Story

Bug Be-Gone wants to develop a natural insect repellent using **limonene**. Limonene is a compound found in **citrus fruits**. We have been hired to determine the best way to extract limonene from citrus fruits.



Objective

We are tasked with determining which factors give the best limonene yield. The factors we are evaluating are which fruit (oranges vs. lemons) and which collection methods (zest/peel).



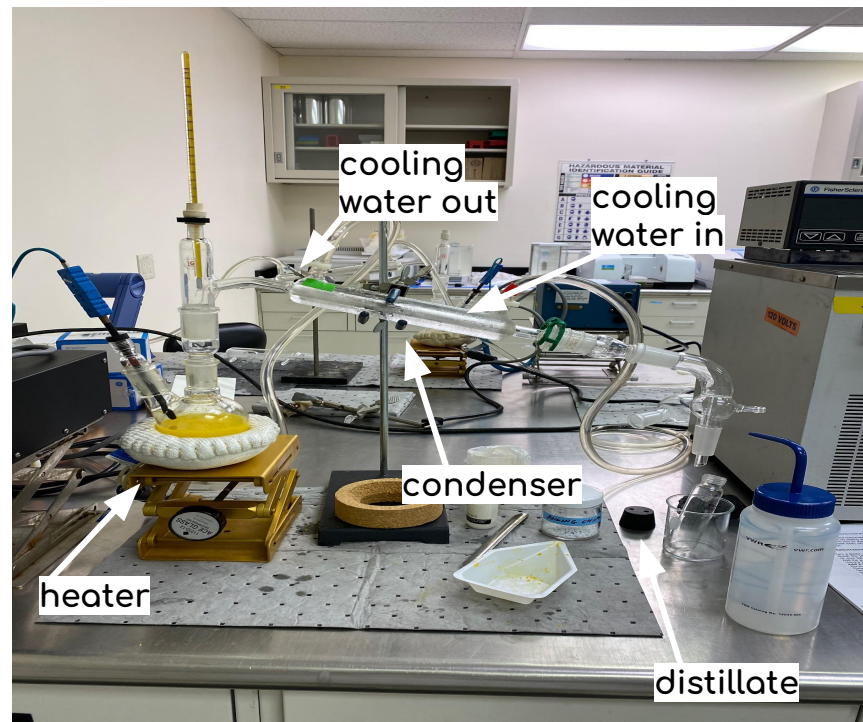
Experimental Procedure

Students will be using the two collection methods (zesting/peeling) to obtain 15 g samples.



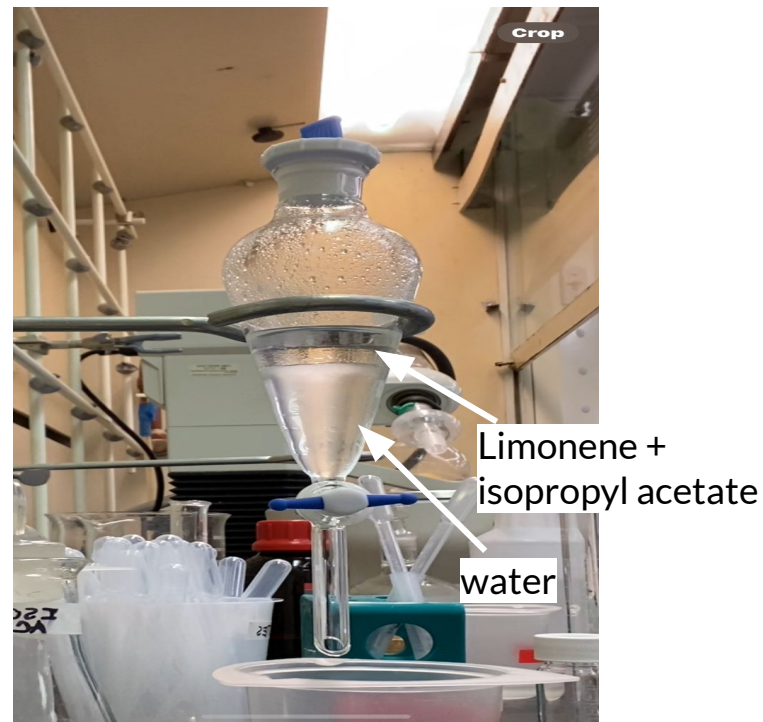
Methods - Steam Distillation

Stream Distillation is used to extract limonene from the zest & peels.

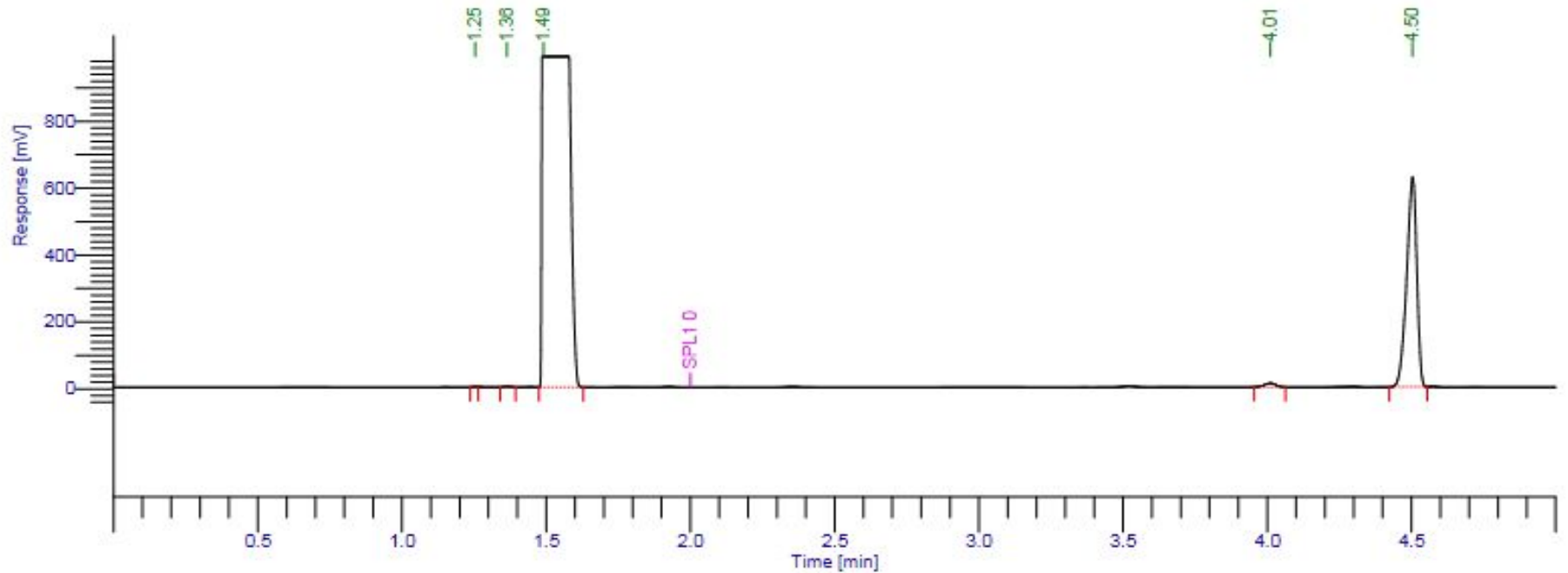


Methods - Separatory Funnel

Separatory funnel is used to separate limonene + isopropyl acetate separating from water.

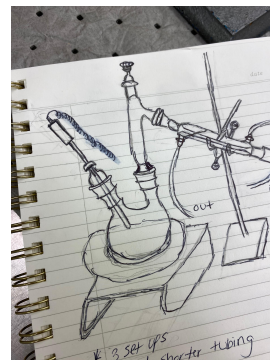
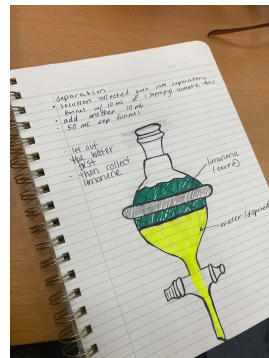


Sample of the Data - GC



Individual Highlight - Jamani

- I learned more about organic chemistry
- I also learned how to help students problem solve and get them to think more in depth about different processes.
- I also gained a lot of professionalism in the lab as well as outside of the lab.



Thank You!

Questions

Special Thank You:
Kevin, Natasha, and Tia!



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