

LET'S DO CHEMISTRY

Nature of Dye



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Prepare a dye

Place two pieces of cochineal bug parts into the mortar. Crush the bug into a fine powder using the pestle. What does it look like?

Use the water dropper bottle to add three or four drops to the mortar and mix the solution using the pestle. How does it change?

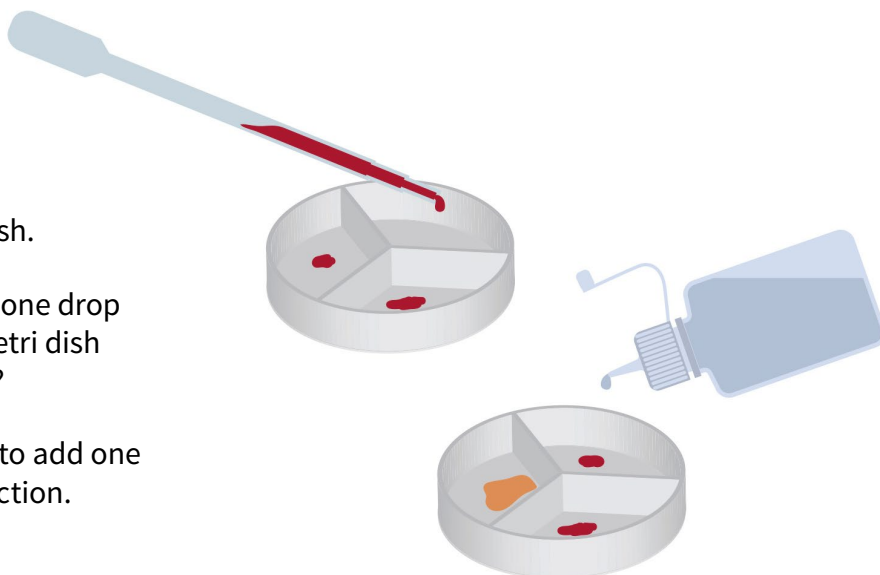


Change the color

Use the pipette at your station to transfer one drop of your bug mixture (cochineal dye) from the mortar dish into each section of the 3-part petri dish.

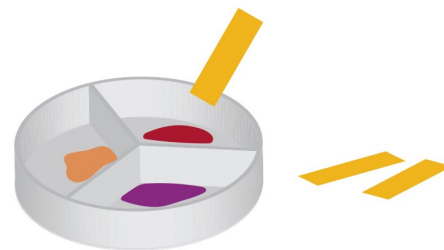
Use the vinegar dropper bottle to add one drop onto the cochineal dye in one of the petri dish sections. What changes do you notice?

Now, use the soda ash dropper bottle to add one drop onto a different cochineal dye section. What changes do you notice here?



Test and experiment

Test the differences in the three dyes using strips of pH paper. How do the different dyes compare? Experiment by mixing the three dyes. You can retest the pH of your new mixture.



Let's keep exploring! Make a cochineal bookmark to take home! Dip a strip of watercolor paper into your dye samples to transfer the color. Or try using the pipette to add colors to the paper. How many shades of reds, oranges, and purples can you make?