

Chapter 8: Instructions for Students with Color Vision Deficiency or Color Blindness

Chemistry relies to some degree on qualitative observations and data. However, if you perceive color differently than most people sometimes making these observations can be challenging. People who perceive color differently than the average person are described as having *color vision deficiency* or *color blindness*.

Follow the instructions below to complete the Precipitation Reactions Lab.

Download the Color Blind Pal App

- Apple: <https://apps.apple.com/gb/app/color-blind-pal/id1037744228>
- Android: https://play.google.com/store/apps/details?id=com.colorblindpal.colorblindpal&hl=en_US

The Color Blind Pal app allows you to focus your camera on something and it will verify the color of that item. To begin, open the app and click on the "i" in the circle to pull up the settings page.

- Read through "How to use this app"
 - Note that you can capture the entire screen using the "Freeze" button. Then you can move the target around the screen to get the target placed over the item you would like to make a color observation about in the picture.
 - You can take screenshots of images you capture in the Color Blind Pal app with your phone camera for future reference.
- Select your color vision deficiency type

You are now ready to complete the lab.

- Open the Beyond Labs platform and navigate to the "Writing Balanced Precipitation Reactions" assignment using the instructions in the report.
- When you mix solutions, an image of the result is pictured in a viewer to the left of the test tube.
- Hold your phone camera up to the screen in the upper left corner where the test tube viewing window is at (Figure 1).

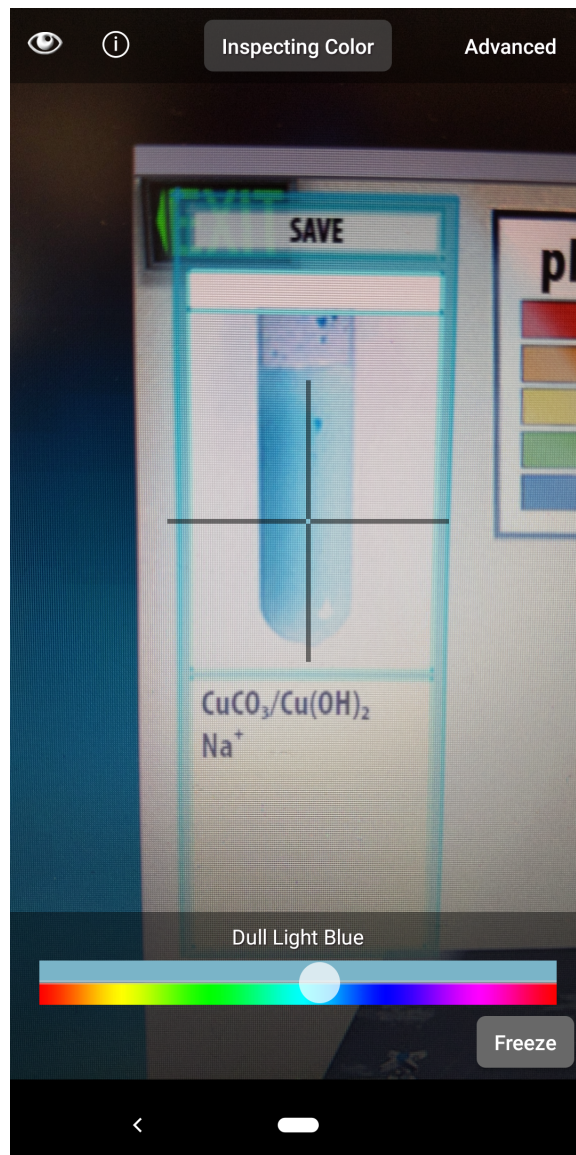


Figure 1: Image captured using the ColorBlindPal app showing a screen capture of the precipitate formed in the reaction between Copper (II) ion and sodium carbonate

- Click "Freeze". This will freeze the image as a picture. Adjust the target on the screen so that the color of the precipitate in the test tube is under the target. The text read out of the color of the precipitate will be displayed at the bottom of the screen. Use these color text read-outs to fill in data for the precipitation color results in the lab.