

Fluorescence

Equipment:

- Rainbow LED board
- Dye cuvettes
- Battery board
- Alligator clips

Warning: DO NOT OPEN THE CUVETTES !!!

Experiment:

1. Hook up the LED board to the 6V battery board. The LEDs have different colors – what color corresponds to what wavelength?

Wavelength	380 nm	410 nm	470 nm	502 nm
Color				

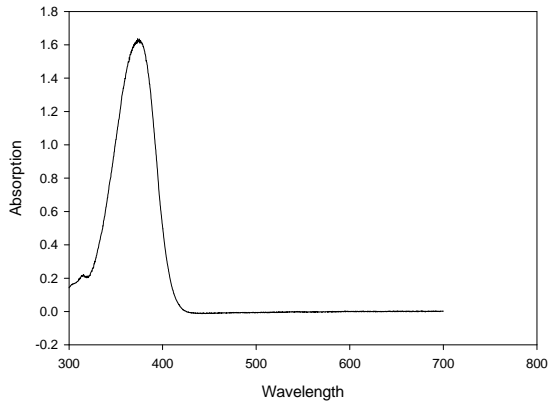
Wavelength	565 nm	590 nm	610 nm	660 nm
Color				

2. Hold each cuvette in front of the LED array and look at them from the side. Which of the cuvetts scatters all colors more or less equally, but does not fluoresce?

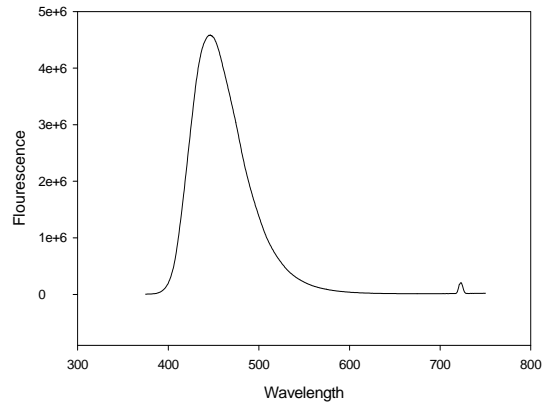
3. Which cuvette does not fluoresce or scatter the light?

4. Compare the remaining fluorescent dyes to the spectra on the back side. Which dye is in which cuvette?

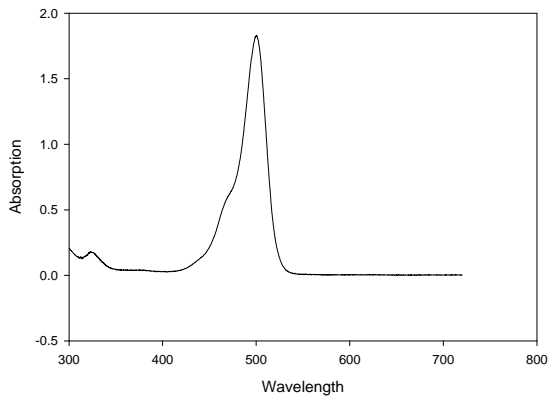
Coumarin 1



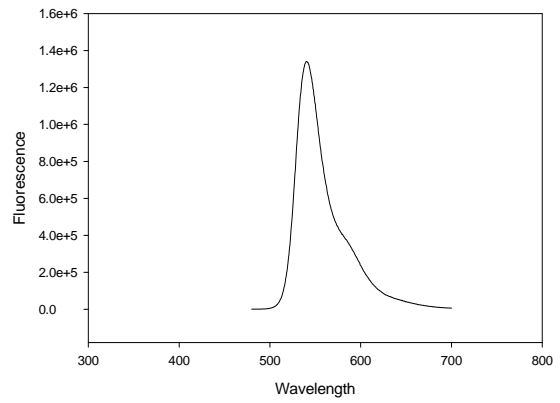
Coumarin 1



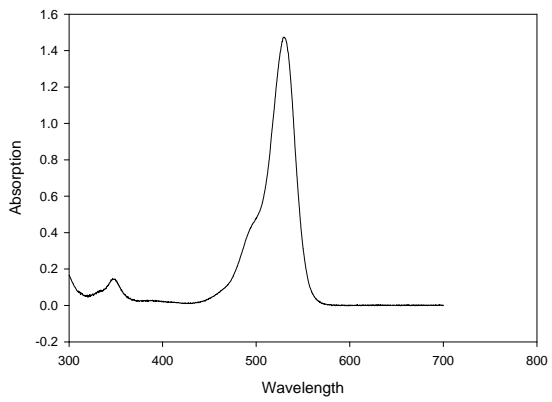
Fluorescein



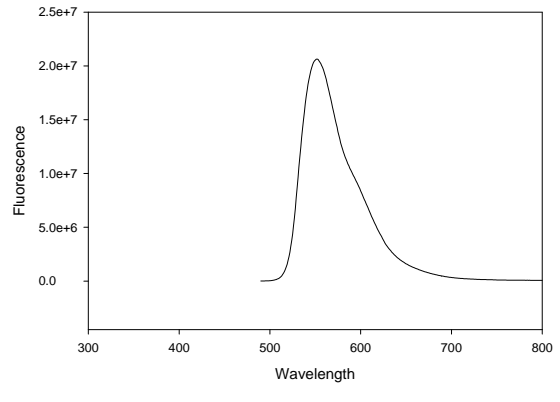
Fluorescein



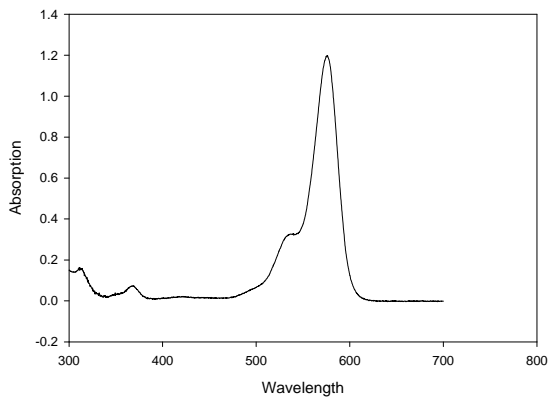
Rhodamine 6G



Rhodamine 6G



Sulforhodamine 101



Sulforhodamine 101

