

Lab 5

Subtractive color mixing

Experiments on subtractive color mixing are the most rewarding, as they use equipment that all students are familiar with, such as acrylic paints and brushes, and white paper on which they paint their mixed colors. Inexpensive and very accurate spectrophotometers are now commercially available, and provide spectra of any color instantaneously on a PC. For example we used an Ocean Optics CHEM2-VIS-FIBER USB2000-VIS-NIR Fiber Optic Spectrometer. For specifications see <http://oceanoptics.com>.

The lab set up we used is shown in Fig. 1 (the spectrum on the screen is enhanced for clarity).

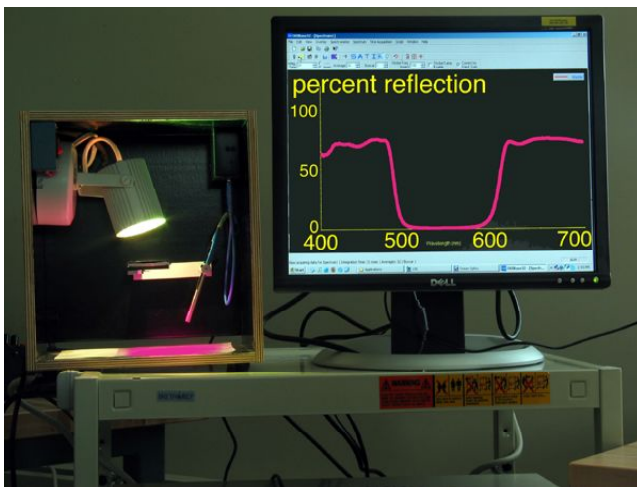


Fig. 1

The set up and all the experiments on subtractive color mixing are described at length in *P.U.P.A. Gilbert and Willy Haerberli. Experiments on subtractive color mixing with a spectrophotometer. Am. J. Phys. 75, 313-319 (2007).*
<http://scitation.aip.org/getabs/servlet/GetabsServlet?prog=normal&id=AJPIAS000075000004000313000001&idtype=cvips&gifs=yes>