INSTRUCTIONS FOR THE USE OF THE VISIBLE SPECTROPHOTOMETER SPEC 20/20D, SPEC EDUCATOR, and FLINN SPEC

I. How to use the spectrophotometer (Spec 20/20D)

1. Turn on the instrument and let it warm up for at least 5-10 minutes.

2. Select the wavelength with the dial next to the sample compartment.

3. With the sample compartment closed and empty, adjust the % Transmittance (zero percent transmission of light) to read **0% T** using the left front dial.

4. Place a clean (no fingerprints), dry cuvette filled approximately 3/4 full of the blank sample (solvent only) in the sample compartment. Close the sample compartment. Adjust the % Transmittance to read **100% T** (100 percent transmission of light) using the right front dial.

5. Remove the blank cuvette and place the cuvette containing the sample in the sample compartment. Close the sample compartment. Read and record the value registered on the meter.

Note: Every time the wavelength of light is changed, the instrument must be recalibrated to read **0% T** and **100% T** with the blank. Repeat steps 2-5.

II. How to use the spectrophotometer (Spectronic Educator)

1. Turn on the instrument and let it warm up for 15 minutes. This allows the lamp and the detector to stabilize.

2. Select either the % Transmittance or Absorbance operating mode by pressing the % T/A selector switch until it clicks into place.

3. Select the wavelength with the dial next to the sample compartment.

4. Place a clean (no fingerprints), dry cuvette filled approximately 3/4 full of the blank sample (solvent only) in the sample compartment. Close the sample compartment. Adjust the % Transmittance to read **100% T** (100 percent transmission of light) or **0.00 A** using the right front dial.

5. Remove the blank cuvette and place the cuvette containing the sample in the sample compartment. Close the sample compartment. Read and record the value registered on the meter.

Note: Every time the wavelength of light is changed, the instrument must be recalibrated to read **100% T** or **0.00 A** with the blank. Repeat steps 3-5.

III. How to use the spectrophotometer (Flinn Spectrophotometer)

1. Turn on the instrument and let it warm up for at least 5-10 minutes.

2. Select the wavelength with the dial next to the sample compartment.

3. Adjust the filter wheel so that the filter corresponding to the wavelength selected is in place.

Violet filter	300-375 nm
Blue filter	375-520 nm
Yellow filter	520-740 nm
Red filter	740-900+ nm

4. Adjust the mode to display **Absorbance** and **% Transmittance** simultaneously. Adjust the mode by pressing the mode button on the face of the instrument.

5. With the sample compartment closed and empty, adjust the % Transmittance (zero percent transmission of light) to read **0% T** using the left front dial.

6. Place a clean (no fingerprints), dry cuvette filled approximately 3/4 full of the blank sample (solvent only) in the sample compartment. Close the sample compartment. Adjust the % Transmittance to read **100% T** (100 percent transmission of light) using the right front dial.

7. Remove the blank cuvette and place the cuvette containing the sample in the sample compartment. Close the sample compartment. Read and record the value registered on the meter.

Note: Every time the wavelength of light is changed, the instrument must be recalibrated to read **0% T** and **100% T** with the blank. Adjust the filter wheel if necessary. Repeat steps 2-7.