EasyMatch® QC Lesson 3

Measuring in a Transmittance Mode

This lesson is appropriate only if you are using an instrument capable of measuring in transmittance. If you are using a ColorQuest XE, ColorQuest XT, ColorQuest II Sphere, UltraScan XE, UltraScan PRO, or UltraScan VIS, proceed with this lesson. If you are using a ColorFlex EZ, ColorQuest 45/0 LAV, LabScan XE, or MiniScan EZ, do not attempt this lesson.
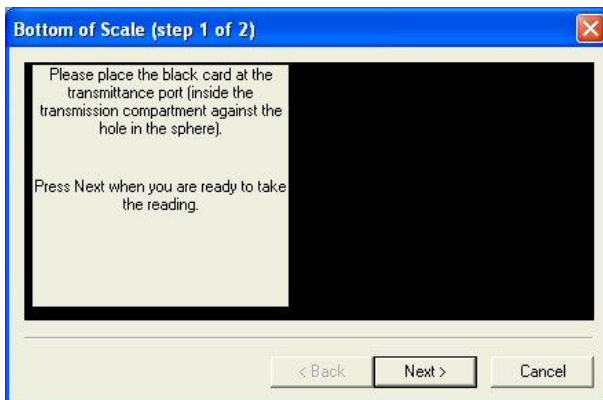
Your instrument should already be attached to the computer and installed in EasyMatch QC before performing this lesson.

Most transmittance measurements are made using the TTRAN (total transmittance) mode. The steps required for performing this type of measurement are described below.
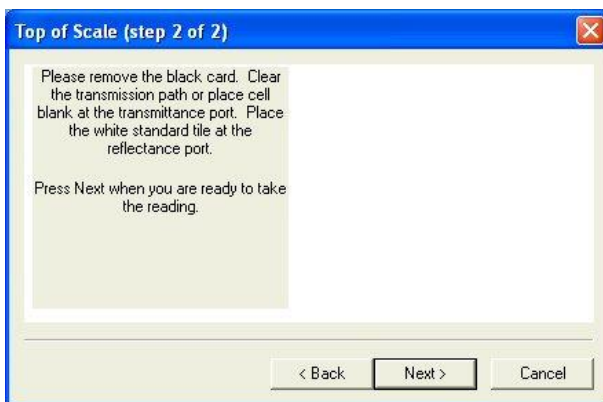
1) **Select Mode**. From the Sensor Menu, choose **Set Modes**. The following screen will appear.
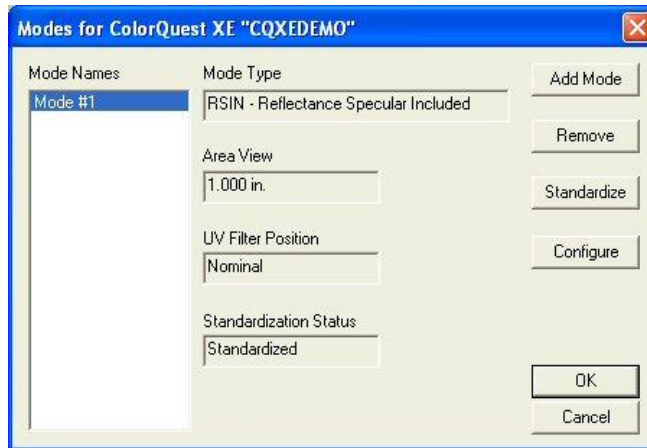
a) Highlight each of the existing modes in turn and examine the parameters shown on the right side of the screen until you find the standardization mode desired (TTRAN for the largest area view available with the UV Filter Position Nominal). If such a mode doesn't exist, create it using the **Add Mode** button.

b) With the desired mode selected (highlighted), click **Standardize**. The following prompt will appear.

Bottom of Scale (step 1 of 2)

Please place the black card at the transmittance port (inside the transmission compartment against the hole in the sphere).

Press Next when you are ready to take the reading.

< Back | Next > | Cancel

2) **Set Bottom of Scale.** Place the black card inside the transmittance compartment, flat against the hole in the sphere. Close the transmittance compartment door as much as possible and click **Next**.

Top of Scale (step 2 of 2)

Please remove the black card. Clear the transmission path or place cell blank at the transmittance port. Place the white standard tile at the reflectance port.

Press Next when you are ready to take the reading.

< Back | Next > | Cancel

   a) Remove the black card from the transmittance compartment. If you will be measuring a film or other clear solid sample, simply click **Next** to continue the standardization process. If you will be measuring a liquid, place a clear liquid (distilled water for water-based samples, toluene or benzene for resins, or mineral oil for oils) in a cell of the desired size and center the clear portion of the cell over the transmittance port (sphere) in the transmittance compartment. It is suggested that you use a transmittance cell holder to do so. Close the transmittance compartment door.

3) **Set Top of Scale**. Place the white standard tile at the reflectance port (outside the instrument) with the white side toward the port. (This instruction does not apply to ColorQuest XT.) Then click **Next** to set the top of scale. Standardization is then complete.

   a) Click **Finish** and then **OK** to exit the Modes screen. Leave the white tile at the reflectance port while you make your measurements.

Standardization Status

The sensor has been successfully standardized.

< Back | Finish | Cancel
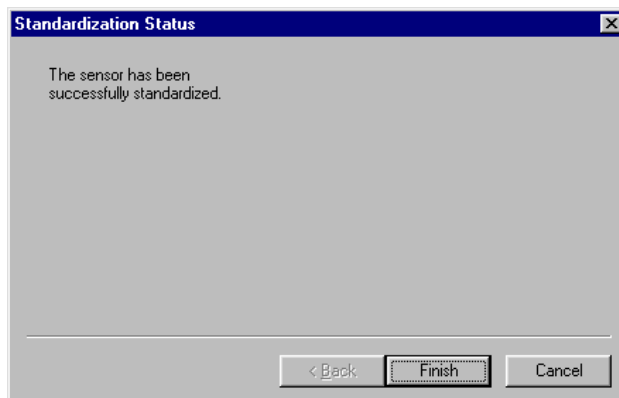
4) **Read Samples**. Center your sample over the transmittance port (the hole in the sphere inside the transmittance compartment). If you are measuring a film or flat solid sample, using the transmittance clamp to hold the sample flat against the port is recommended. If you are measuring a liquid sample, fill an appropriately-sized transmittance cell with the liquid and center one of the clear sides of the cell over the transmittance port. Use of a transmittance cell holder is recommended. Be sure that the level of the liquid is sufficient to cover the opening in the sphere and that the cell is flat against the opening. Close the transmittance compartment door.

Note: The size of the transmittance cell used for sample measurements must match that of the cell used for standardization.

a) Read the sample as a standard or sample by pressing **F2** or **F3**, respectively. Other samples may then be placed in the transmittance compartment and read, if desired.