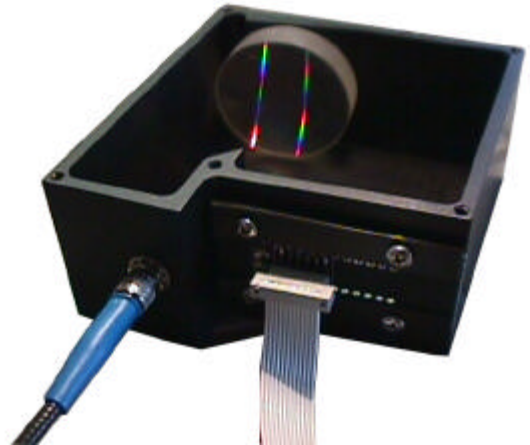


Color Measurement Systems

➤ **BLACK-Comet CXR SpectroColorimeter**

- Reliably measure CIELAB & Delta E* values
- Fiber optic Interface for sampling accessories
- Concave grating provides high sensitivity and
- Consistent resolution throughout 280-900nm range
- No mirrors for lowest possible stray light
- Extremely rugged with no moving parts
- Shock-proof durability and permanent alignment
- Miniature size, low cost, portable instrumentation
- Battery pack options for field measurements
- Simple USB2 interface to notebook & desktop PCs



High performance spectrocolorimeter has internal concave grating spectrograph optics with no mirrors or adjustments



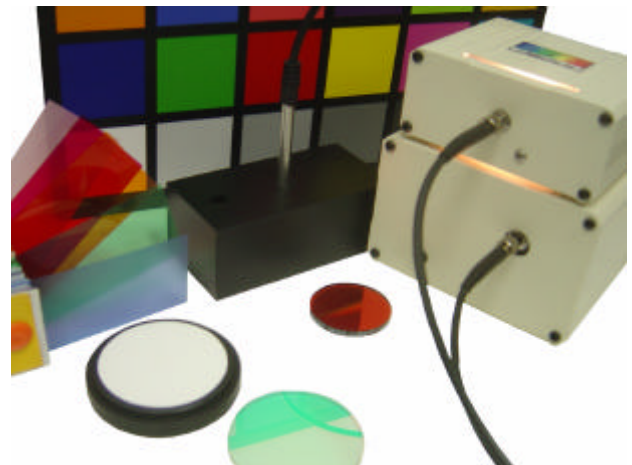
RFX Reflectance fixtures have integrated halogen light source to make color measurement easy by placing samples on top

➤ **Color Measurement Accessories**

- **Liquid samples** - cuvette holder or dip probe
 - Food & Beverage
 - Industrial & Home liquids
- **Solid samples** - reflectance probe or fixture
 - Textiles
 - Plastics
- **Powder samples** - reflectance fixture
 - Pharmaceuticals
 - Raw materials

➤ **Versatility with Fiber Optics**

- **For use** in the lab, in the field, on-line, or at-line on the production floor
- **Color monitoring** and measurement
- **Quality Control** of incoming raw materials or finished products
- **Little to no sample prep needed!**



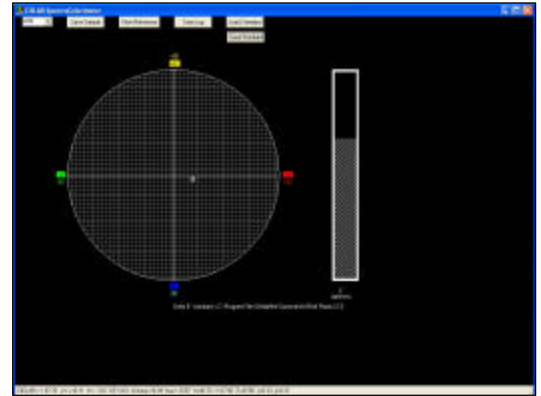
Reflectance Probe & Light source

Color Measurement Systems

➤ SpectraWiz Software included free

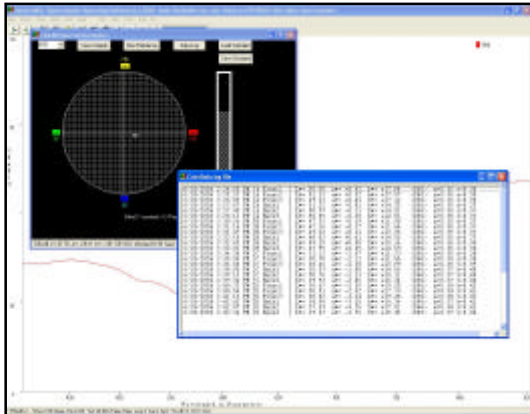
• CIELAB color app measurements

- L*: Brightness (0 to 100)
- a*: Green (-a) to Red (+a)
- b*: Blue (-b) to Yellow (+b)
- Delta E* color difference
- X Y Z tristimulus
- xy chromaticity
- chroma
- hue



CIELAB color measurement application

- Select any illuminant (A-C,D50-D75,F1-F12)
- Compare samples to saved color standards
- Sample color values can be saved to text file



Color App and Data log work with live Spectra

➤ Measure Delta E* color difference

- Compare sample colors quickly & accurately
- Color variation displayed as numerical value
- Identify variations better than your eyes

➤ Save your own color standards for comparison

- Open color standard file for Delta E* value measured against target sample

➤ Easily save color data into text log file

- Import log into Word or Excel for data management and QC reporting

Item	Description	SpectroColorimeters include SpectraWiz software free	Price
BLACK-CXR	SpectroColorimeter	-best quality concave optics with fiber optic & USB2 interface	\$2750
BLUE-Wave-VIS	SpectroColorimeter	-compact miniature optics with fiber optic & USB2 interface	\$2500
GREEN-Wave-VIS	SpectroColorimeter	-lowest cost miniature optics with fiber optic & USB interface	\$1948
Accessories for solids or powders using a reflectance stand – samples placed o top			
RS50	Reflectance standard to set white reference, 50mm diameter		\$125
RFX-2	Reflectance fixture with integrated light source & F600-VIS-NIR fiber optic cable		\$625
Accessories for solids or powders using a reflectance probe – samples place under			
RS50	Reflectance standard to set white reference, 50mm diameter		\$125
R600-8-VISNIR	Reflectance probe VIS-NIR, 600um fiber optic cable, 7 illuminate around 1 read		\$495
RPH	Reflectance probe holder. Maintains 45 or 90 degree angle variable distance (0-3/4")		\$125
RTIP45	Black tip has 45 degree angle and slides onto reflectance probe and locks to set position		\$125
SL1	Light source to illuminate fiber optic probe with 10,000 hour Tungsten-Krypton bulb		\$375
SL1-Filter	Option instead of SL has color equalization filter in 0.5 inch diameter nose cone		\$595
Accessories for liquids – samples placed in cuvette or dip probe placed in beaker			
SL1-CUV	Integrated light source with standard 10 mm cuvette holder and F600 fiber		\$655
DP400	Dip probe with 400um armored fiber, includes 10mm path length tip (requires SL1 light)		\$1595
DP400-TIP	Additional tips for dip probe. Specify 2, 5, 10, or 20mm path lengths		\$410