

Applications Note

Insight on Color

Vol. 16, No. 2

Handling Options for Very Small Samples

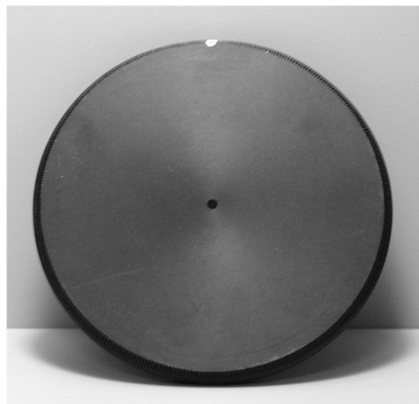
Sometimes product is in short supply or is very expensive. In these cases, using the smallest amount of sample possible for color measurement is preferable. This *Applications Note* describes HunterLab's color measurement options designed for measuring very small samples or quantities of sample. More information on these options can be obtained from HunterLab's Sales Department.

Options for Solids

ColorQuest XE and UltraScan VIS: A02-1011-184 modified port plate with **4-mm** round opening that allows reflectance measurements of samples only slightly larger than that opening or small areas of larger samples. The retroviewer option may be used to ensure that the desired sample area completely covers the opening in the port plate.

Cautions: Small area view (SAV) option required. Performance specifications will not be met with this smaller-than-standard port plate. The change of geometry with this option will cause a slight shift in the color values of the calibration standards.

LabScan XE: CMR 2562 modified port plate with **3-mm** round opening that allows reflectance measurements of samples only slightly larger than that opening or small areas of larger samples. The retroviewer option may be used to ensure that the desired sample area completely covers the opening in the port plate.



Cautions: Variable sample illumination (VSI) option required. Performance specifications will not be met with this smaller-than-standard port plate. The change of geometry with this option will cause a slight shift in the color values of the calibration standards.

UltraScan XE: A02-1010-838 modified port plate with **4-mm** round opening that allows reflectance measurements of samples only slightly larger than that opening or small areas of larger samples. The retroviewer option may be used to ensure that the desired sample area completely covers the opening in the port plate.

Cautions: Small area view (SAV) option required. Performance specifications will not be met with this smaller-than-standard port plate. The change of geometry with this option will cause a slight shift in the color values of the calibration standards.

UltraScan PRO: A02-1011-184 modified port plate with **4-mm** round opening that allows reflectance measurements of samples only slightly larger than that opening or small areas of larger samples. The retroviewer option may be used to ensure that the desired sample area completely covers the opening in the port plate.

Caution: Performance specifications will not be met with this smaller-than-standard port plate. The change of geometry with this option will cause a slight shift in the color values of the calibration standards.

Options for Powders

ColorQuest XE and UltraScan VIS: D02-1012-313 holder and special port plate that allow reflectance measurements of approximately **0.4 cc** of packed powder.

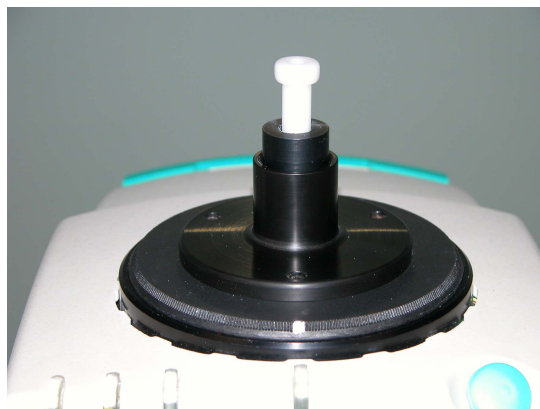
Powder is scooped into the powder holder and packed down with a plunger. The powder holder is then placed in a specially-designed port plate and the powder measured through the holder's clear window.



Cautions: Small area view (SAV) option required. The powder holder should be used ONLY for color difference measurements.

LabScan XE: CMR 2439 holder and special port plate that allow reflectance measurements of approximately **0.4 cc** of packed powder.

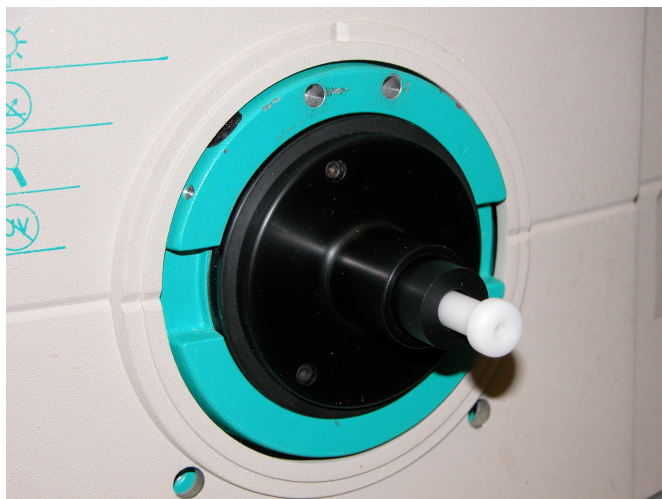
Powder is scooped into the powder holder and packed down with a plunger. The powder holder is then placed in a specially-designed port plate and the powder measured through the holder's clear window.



Cautions: Variable sample illumination (VSI) option required. The powder holder should be used ONLY for color difference measurements.

UltraScan XE: D02-1012-252 holder and special port plate that allow reflectance measurements of approximately **0.4 cc** of packed powder.

Powder is scooped into the powder holder and packed down with a plunger. The powder holder is then placed in a specially-designed port plate and the powder measured through the holder's clear window.



Cautions: Small area view (SAV) option required. The powder holder should be used ONLY for color difference measurements.

Options for Transparent Liquids

ColorQuest XE, ColorQuest XT, UltraScan XE, UltraScan PRO, and UltraScan VIS: L02-1012-202 semi-micro cell holder and optical assembly, which allows transmittance measurements of transparent liquids in a 10-mm (**0.4 mL**) or 20-mm (**0.8 mL**) path length semi-micro cell (cuvette).

The semi-micro cell holder with beam-reducing optics is installed in the transmission compartment and then the cell filled with sample is inserted for measurement.



Cautions: The same cell used to hold the blank during standardization should be used for sample measurements, particularly when disposable cells are used.

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