

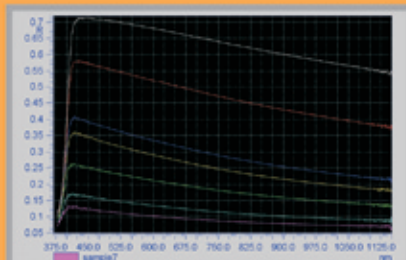
# Measurement of Colour and Reflectance of Paints and Textiles Extending into the Near Infra-Red Region using UV-Vis

Mr. Geoff Condick and Miss Laura Parkinson  
GBC Scientific Equipment Pty. Ltd.

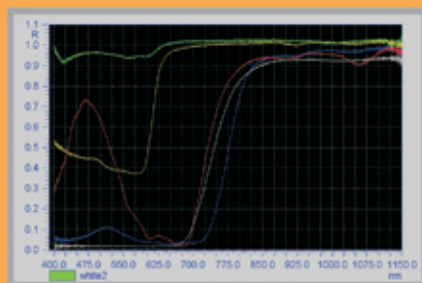


Traditional integrating spheres employed as colour measurement accessories in UV-Visible spectrometers have a usable wavelength range which is restricted by the choice of the detector. This particularly limits the upper wavelength range to about 800nm or less.

The DRS1150 Integrating Sphere accessory for the economical Cintra 10e UV-Visible spectrometer employs an advanced solid state detector. This technology extends the range of measurement to 1150nm, including all of the visible region.



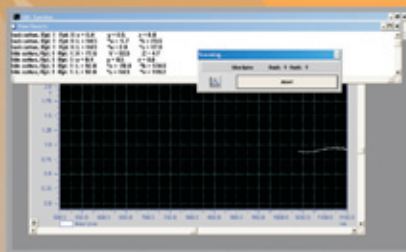
Battleship Paint Samples Scanned in the Infra-Red Region



Reflectance Scans of Various Fabrics used in the Colour Analysis

Measurement in the region 800nm to 1150nm are of particular interest for military imaging applications where it is desirable to know the reflectance due to natural light sources and infra-red lasers. To analyse paints and textiles above 800nm would normally require an expensive NIR spectrometer.

Solid samples such as textile swatches or paint may be easily mounted using the built-in sample holder, plus there is 10mm cell holder for turbid liquid samples. The reflectance range of 0.01 to 1.0 means that even weakly reflecting samples may be resolved.



The colour application can be used for quality control or analysis on any surface coatings, the software includes a comprehensive suite of colour models based on CIE tristimulus values that are easy to load and use.