

Conservation & Heritage Solutions

- Spectroscopy
- Hyperspectral Imaging



Spectroscopy

The **FieldSpec 4** is a fast, precise and truly field-portable spectroradiometer designed by researchers, for researchers to perform solar spectral reflectance, radiance, and irradiance measurements.

The **4300 Handheld FTIR Spectrometer** is a lightweight, ergonomic spectrometer, which enables the direct identification and assessment of high-value materials without sample extraction.



A FieldSpec 4 instrument being used to characterise both organic and inorganic materials in pigments and binders on a number of illuminated manuscripts.

Key Applications

- **Characterisation of organic and inorganic materials in pigments and binders on manuscripts, paintings and historical artefacts**
- **Analysis of molecular vibrational overtones characteristic of functional groups (e.g. hydroxyls, carbonates, and the methylenic and amide groups) associated with certain paint/pigment binders**
- **Safe identification and assessment of high-value materials in situ, without moving, disturbing or even contacting the material**
- **Analysis and testing of degrading plastic/polymeric materials in order to assign correct restoration processes**

Hyperspectral Imaging

The **Hyperspec Starter Kit** provides everything needed for high performance imaging and sample scanning in the lab, and in the field.

This **non-destructive spectral technique** is invaluable for a wide range of historical research relating to changes in colour, chemicals and substrates. Hyperspectral imaging simultaneously yields precise information for all wavelengths across the complete spectral range of the sensor. With the creation of the hyperspectral datacube, a data set that includes all of the spatial and spectral information within the field of view, research teams are able to thoroughly evaluate documents and other artefacts that will greatly **enhance knowledge** of the spectral composition and uniqueness of samples.



The Hyperspec Hyperspectral Imaging Starter Kit

Performance

- ✓ **Instant results** - scan sample materials and display results in an instant
- ✓ **Easy to use** - simple to set up and use
- ✓ **Determine spectral band differentiators**
- ✓ **Flexible** - quickly modify configurations
- ✓ **Cost-effective deployment**
- ✓ **Rapid development of spectral libraries**

Key Applications

- **Forensic analysis and validation of documents and artefacts**
- **Discover original intent elements and validate authenticity**
- **Identify regions for restoration**
- **Assess original colouring and pigmentation**
- **Enhance faded or hidden attributes**

analytik

Barn B
2 Cygnus Business Park
Middle Watch
Swavesey
Cambridge
CB24 4AA
+44(0)1954 232 776
info@analytik.co.uk
www.analytik.co.uk

**For more information on our solutions for
Conservation & Heritage, please contact us on
01954 232 776**

