

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

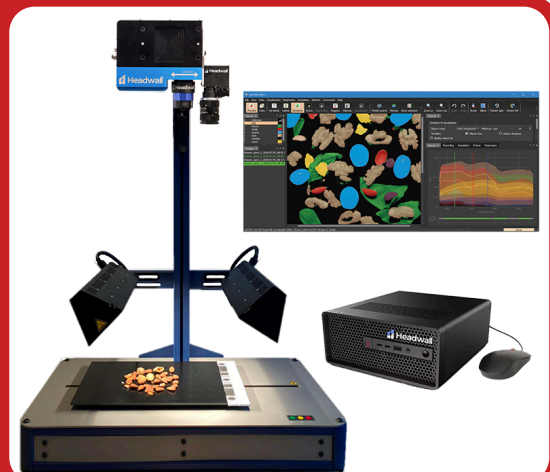
The **MV.Scan Hyperspectral Imaging System** provides everything needed for high performance imaging and sample scanning across the VNIR, NIR, and SWIR spectral ranges. MV.Scan combines robust hardware with intuitive software to deliver rapid, accurate, and non-destructive analysis.

The **BlueEye UV Hyperspectral Camera System** is a state-of-the-art and only commercially available solution for capturing high-resolution spectral and spatial data in the ultraviolet range (220–380 nm), all in real time.

This **non-destructive spectral technique** is invaluable for a wide range of historical research relating to changes in colour, chemicals and substrates, greatly enhancing knowledge of the spectral composition and uniqueness of samples.

Performance

- ✓ **Outstanding Imaging Performance** -
High spatial and spectral resolution
- ✓ **Instant results** - scan sample materials and display results in real time
- ✓ **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**
- ✓ **Enhanced Safety** - fully integrated UV-Stage with interlocked enclosure



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**



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