



UV-visible-NIR refl

Painted surfaces – FORS is especially useful for the identification of blue, green, white and red pigments (see Fig. 2). FORS spectra of most yellow and black pigments are not characteristic enough to allow identification, except at times within a broad category (e.g., iron oxides and hydroxides, or carbon-based pigments). Binding media and varnishes can also be broadly categorized (see Fig. 3), although complications can arise when their spectral features overlap with those of the support, as is the case especially for parchment.

Paper and parchment – these two materials can be easily differentiated when doubts exist, and FORS can be used along with other tools to study their degradation mechanisms.

Textiles – FORS allows distinction between wool, silk, cotton, and bast (e.g., linen or hemp) fibres. This can be useful to identify the exact nature of the support for paintings on canvas, and for the characterization of tapestries as well as historic carpets, costumes and upholstery fabrics.

Plastics – FORS has recently been used to study the degradation of plastic materials used in 20th century artworks and objects. This type of application is likely to become more common in view of the growing interest in the fugitive nature and complex material composition of much contemporary art.

Advantages and limitations

FORS has the advantage of being completely non-invasive and very quick – a good quality spectrum can be obtained in less than 10

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