

## ***Scattered reflectance spectroradiometry : what is it ?***

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Abstract :

Spectroradiometry is an analytical technique that is non-destructive, rapid, portable and cheap. As with thin-section petrography or X-rays diffraction analysis, for example, it is based on comparing specimens with reference material of known origin. Although petrographic and other reference collections have existed for several decades and have long since been documented fully, the same cannot be said for spectroradiometry. This is mostly due to its extreme sensitivity to numerous parameters that are not directly related to mineral or chemical composition -an effect termed the 'matrix effect'. While this might for a long time have seemed to be an inconvenience -it was not until the 1970s that spectroradiometry began to be used (for purposes linked to remote sensing and to the exploration of Mars)- the matrix effect in fact constitutes the method's principal point of interest since, in certain cases, it allows one to undertake far finer comparisons than those possible using any other method. Numerous Alpine axeheads from main European museums or private collections have been studied, or are in the process of being studied, to try to understand why simple polished axeheads have spread throughout Europe, sometimes at more 2 000 km from the Mount Viso quarries. Other spectroradiometric applications for the source identification ("callaïs", pigments...) are also touched on to show the easy-to-use and efficiency of this technique in archaeology.