

## **New Applications for Paper Fiber Analysis for the Characterization of Photographs**

Lee Ann Daffner<sup>1</sup>, Paul Messier<sup>2</sup>

The value of reference collections of artist's materials has been proven for artistic media. Contemporary practice in art conservation has been formed by methodical studies of historical reference materials, such as pigments, resins and papers. Studies based on historical samples are extremely rare in photography conservation as the materials are scarce and, until only recently, have not been compiled or catalogued in any meaningful way.

In a collaborative study between The Museum of Modern Art in New York and Paul Messier, samples from a historic paper reference collection were chosen dating from 1896 –2006. Integrated Paper Services (IPS), a provider of forensic paper services, carried out semi-quantitative fiber analysis, principally by the application of stains and identification of fiber morphology, to determine source and pulp processing. Data from IPS was entered into a database and compared against a blind test of fiber samples. Currently, protocols for taking fiber samples are being evaluated and statistical viability of the data are being evaluated by colleagues in the conservation science division of MoMA.

The final stage of the project is the application of the data to a group of MoMA collection materials. This portion of the study evaluates the work of two Bauhaus masters, comparing photographs that range in date from 1923 – 1939. This time frame is ideally suited for this early proto-study of fiber analysis because the time frame is wide enough to accommodate some margin of error. There are, however, distinct trends in the paper fiber distribution within those years and that helps in characterization and dating. A characterization dossier for photographs with fiber analysis, augmented by other analytic techniques such as X-ray fluorescence and surface analysis, could establish if a certain hand is present in these prints.

---

<sup>1</sup> Andrew W. Mellon Foundation Conservator of Photographs, Conservation Department, Museum of Modern Art

<sup>2</sup> Conservator of Photographs, Paul Messier LLC, Boston, MA 02135, USA, 617 782 7110, pm@paulmessier.com