Alfred Stieglitz (American, 1864–1946)

Georgia O'Keeffe—Hands and Thimble

1919
Palladium print
Alfred Stieglitz Collection

AIC accession number: 1949.745

Stieglitz Estate number: OK 3B

Inscriptions: Unmarked recto; inscribed verso, lower right, in graphite: "Ch / OK 3 B"

Dimensions: 24.4 x 19.4 cm (image); 25.1 x 20.3 cm (paper)

Print thickness: 0.291 mm

Surface sheen: Low gloss (11.4 GU @ 85°)

Paper tone: L*91.08, a*1.46, b*14.46

Mount: Original

Mount tone: L*91.43, a*1.83, b*14.44

Ultraviolet-induced (UV) visible fluorescence (recto): None

X-ray fluorescence (XRF) spectrometry:
See below

Fourier transform infrared (FTIR) spectrometry:
N/A

TECHNICAL SUMMARY

This photograph is a palladium print on cream paper. The print is adhered at the top corners to its original cream mount and is engaged in the original window mat. The window masks the black margins showing the edge of the negative from contact printing. Whether accidental or intentional, the print has been overexposed to light, resulting in some of the high-density dark areas becoming brown and the bright, low-density areas becoming gray. This process is referred to as solarization.[1] The inscription "OK 3B," located at the bottom left corner of the verso of the mount, correlates to the estate or "Leica" number that Georgia O'Keeffe and Doris Bry assigned to mounted prints from the same negative that were in Stieglitz's possession at the time of his death. After Stieglitz's death, Georgia O'Keeffe asked Edward Steichen to treat some of Stieglitz's photographs that had begun to yellow. This palladium print was among those he treated. Though his treatment process is unclear, the print shows slight cracking of the image material in the midtone areas. When the surface of the print is viewed under high magnification, the fibers from the paper are visible and the image sits directly on the fibers, with no intermediary binder. The print does not fluoresce when exposed to long-wave UV radiation. Palladium, iron, and trace amounts of lead and gold were detected using XRF spectrometry. Common to palladiotypes, the residual presence of light-sensitive iron ions could be due to improper washing of the print after processing. The presence of lead could have two sources: while lead could have been used during fabrication of the photographic paper itself, it was also commonly used during the processing of palladium prints, to increase uniform development. The presence of gold could be the result of the artist's use of a gold chloride toner during processing, to create a pink or purple tint in the final print.

[1] Refer to the glossary for a full description of the solarization process.

X-RAY FLUORESCENCE (XRF) SPECTROMETRY

XRF spectral readings were taken from the recto of the work and from the mount when available. The elements listed below have been positively identified in the work; elements in bold have been attributed to the processing of the print.

Print: **Fe**, **Pd**, Au, Pb

Mount: Ti, Fe, Zn

The graph below shows XRF spectra for three distinct measurement areas on the print: the darkest, maximum-density image area (Dmax, purple); the lightest, minimum-density image area (Dmin, green); and the mount, when available (orange). The background spectrum (gray) represents the characteristic contribution of the instrument itself as measured on a Teflon reference and is included in order to discount irrelevant elements from the print's signature. Elements were identified based on the presence of their characteristic peaks. Analysis was performed with a Bruker/Keymaster Tracer III-V+ energy-dispersive handheld XRF analyzer, equipped with changeable Ti and Al filters and a Rh transmission target. Measurements were taken for 120 or 180 LT at 40 kV and 10 µA. The spectrum below illustrates the significant peaks for this print in the energy range from 2 to 11 keV.

Figure 1. (right)
Locations of XRF measurements

Figure 2. (below)
XRF spectra from the Dmax, Dmin, mount, and background signal produced by the analyzer.