



Article: Evaluation of Ultraviolet Filtration by Glazing and Display Case Materials
(Abstract)

Author(s): Morgan Simms Adams, Steven Weintraub, and Hannelore Roemich

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St. NW, Suite 320, Washington, DC 20005. (202) 452-9545, www.conservation-us.org.

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Abstract: Evaluation of Ultraviolet Filtration by Glazing and Display Case Materials

Morgan Simms Adams, Steven Weintraub, and Hannelore Roemich

Presented at the poster session of the 2012 AIC Annual Meeting in Albuquerque, New Mexico.

The UV-filtration properties of over 20 samples of currently available glazing and display case materials are evaluated and the results of two methods for measuring UV filtration are compared. Materials examined include samples of glass, acrylic, polycarbonate, and polystyrene sheets in various thicknesses; materials advertised as “UV-filtering” or “museum grade” are compared to similar materials not designated “UV-filtering.” The two methods for the evaluation of UV filtration are with a UV-visible spectrophotometer and with an Elsec 764 UV meter. In both cases, a tungsten-halogen source with an enhanced UV output was used as the light source. The spectrophotometer was used in transmission mode, where the unfiltered light source was normalized at 100% transmission. This provided information on wavelength-specific filtration properties of the tested materials. The Elsec 764 UV meter provided output as microwatts/lumen. The samples examined are rated as excellent, moderate, and poor UV filters; comparison of the different types of glazing and display case materials reveals that effective UV filtration is available in polycarbonate, acrylic, and glass sheets.

Morgan Simms Adams

Pine Tree Foundation Fellow
Thaw Conservation Center, Morgan Library & Museum
New York, New York, USA

Steven Weintraub

Art Preservation Services
Long Island City, New York, USA

Hannelore Roemich

Conservation Center, Institute of Fine Arts, New York University
New York, New York, USA

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