

Abstract: Films of Liquitex gloss medium on gesso that had been discolored either by dark storage of the original product or from addition of colored matter extracted from linen canvas were bleached by brief exposure to high-intensity visible light. After 20 hours of exposure to a UV-filtered xenon lamp, an exposure dose equivalent to four days under UV-filtered daylight fluorescent lights, the intrinsic yellow color of the naturally aged films (initial Yellow Index of 23) was found to bleach significantly (about 40% of the original color remained after bleaching). For films that were discolored from material extracted from linen canvas (initial Yellow Index of 37), only a small fraction of the yellow discoloration was bleached in the exposure (about 70% of the original color remained after bleaching). Greater degrees of bleaching would have required much longer light exposures, for the bleaching rate decreased progressively during the exposure. In subsequent dark storage of the bleached films, the original levels of discoloration returned. However, when bleached films were subsequently exposed to periodic, moderate light levels simulating gallery conditions, the films retained much of the appearance benefits that had been gained from the bleach treatment.