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Silver Gelatin Photographs

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# AN EXAMINATION OF THE SHORT AND LONG TERM EFFECTS OF LIGHT BLEACHING SILVER GELATIN PHOTOGRAPHS

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## **Abstract**

Light bleaching can often be a successful means of reducing discoloration products in photographic materials, though its short- and long-term effects are unknown. This paper explored the changes that occurred when silver gelatin developed-out photographs that were artificially yellowed by two different methods were subjected to aqueous treatments including water washing, light bleaching and light bleaching with hydrogen peroxide. These samples were evaluated alongside an untreated control to monitor any changes in the strength of the gelatin emulsion, loss of silver density and potential color changes in the light tones and white areas of the photographic image. The samples were evaluated visually and instrumentally after chemical development, after artificial yellowing, after aqueous treatment and finally after artificial aging. The results of the light bleaching treatments were found to vary depending on the type of yellowing that was induced. To further solidify the results, the experiment was repeated on a set of naturally yellowed silver gelatin photographs, which were found to mimic the results of the experimental sample set used in the controlled portion of this experiment.

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