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The Stability of UltraStable Permanent Color Prints

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To a greater or lesser degree, all of the organic dyes used to form the images in conventional color films and prints gradually fade when exposed to light. Even Ilford Cibachrome and Kodak Dye Transfer prints, both of which are exceedingly stable when stored in the dark, will fade to an objectionable degree after relatively few years of display. In long-term display, no current color material with a dye image can even approach the stability of the silver image of a carefully processed black-and-white photograph made with fiber-base paper.

Instead of dyes, UltraStable Permanent Color prints employ highly stable pigments to form the image. The pigments are similar to those used in automobile paints, which must be able to survive years of outdoor sun exposure under the harshest conditions.

Three-year, temperature- and humidity-controlled, high-intensity 21.5 klux fluorescent light fading tests were used to evaluate the stability of prototype UltraStable Permanent Color prints. The tests showed that UltraStable prints are far more stable than conventional dye-image color prints and indicate that, under typical indoor display conditions, UltraStable prints should last for more than 500 years before noticeable image fading or staining occurs.(1) By way of comparison, prints made with Kodak Ektacolor Portra Paper (RA-4 Process) may be expected to suffer noticeable fading after less than 15 years of display under typical indoor conditions; Kodak Dye Transfer prints will fade a similar amount in about 32 years under the same display conditions.

Accelerated high-temperature, humidity-controlled dark storage tests indicate that when stored in the dark, UltraStable prints are absolutely permanent; the prints do not fade or suffer from the ever-increasing yellowish stain that afflicts Ektacolor and similar types of color prints when they are stored in the dark.

It is the author's opinion that UltraStable Permanent Color prints likely will last even longer than carefully-processed, fiber-base black-and-white photographs!

- (1) Bob Schwalberg, Henry Wilhelm, and Carol Brower, "Going! Going!! Gone!!! -- Which Color Films and Papers Last Longest? How Do the Ones You Use Stack Up?", Popular Photography, Vol. 97, No. 6, June 1990, pp. 37-49.