How long will your digital photo prints really last? Good question.

Quality of ink, paper important, but test standards remain unsettled

On the Web


Eastman Kodak: Guide to purchasing inkjet printers - www.kodak.com, click on "inkjet paper," then "inkjet printing basics."

profiting independent testing lab that also tests photographic materials and conducts other long-term tests. This picture might degrade in a matter of years rather than decades, he said.

Faded photographs

Printing is a good way to protect against losing your digital images in a computer calamity. But it's not foolproof. Home inkjet prints have improved greatly but can still fade when exposed to light and under conditions such as hanging from your fridge. The four main fade factors:

1. Light. The brighter and more prolonged the exposure, the more quickly an inkjet photo breaks down.

2. Heat. The higher the temperature, the shorter the photo's lifespan.

3. High humidity. The more water vapor in the air, the faster the fade.

4. Acid pollution. The more atmospheric ozone in the home, the more harm the photo suffers.

H-P vs. Staples: When ozone takes a toll

Wilhelm Imaging Research, of Grinnell, Iowa, recently tested inkjet paper photos from Hewlett-Packard and Staples by exposing them to significant quantities of air pollution.

Describing the test

Wilhelm printed an image on H-P's Premium Photo Glossy and Staples' Photo Supreme High Gloss paper. Both were printed by the H-P Deskjet 650A color inkjet printer and H-P 97/99 inks.

Pollution breaks down the stability of inkjet prints, causing fading. The pictures on the left are how the images looked at the beginning of the test; the ones on the right, after 20 hours of exposure - equivalent to about 6 months in a home. The test was an independent project funded exclusively by Wilhelm Imaging and the company financed the project.

Staples at beginning of test.

Staples after 20 hours.

H-P at beginning of test.

H-P after 20 hours.

Bugs

There are a lot of third-party companies making papers, and we don't know what testing they have done. I'd say the best is the [inkjet] industry - from major manufacturers - have really come a long way. But there are still combinations that people need to be worried about.

Confounding the situation is a longstanding disagreement in the industry about how best to determine the longevity of materials for their lifespan. Companies have been talking for years under the auspices of the International Standards Organization about a mutually agreeable way to test and standardize products. Kodak, Fuji Photo Film Co. and other testing labs do agree on the use of accelerated fading tests - essentially bombarding images with large quantities of light, then using mathematical formulas to forecast when the picture might degrade to an unacceptable level. Where they differ is on the intensities of light to use and in assumptions about the "typical" environment in which photos will be displayed.

Epson, Canon, and H-P and Lexmark, which together make up about 95% of the inkjet printing market, currently subscribe to test methods and assumptions developed by Wilhelm Imaging Research Inc. of Grinnell, a laboratory that tests materials for manufacturers on contract. Wilhelm Imaging in February announced the creation of the WIR Certified Testing Seal program as a way of offering consumers "apples to apples" comparisons across major inkjet brands.

Kodak has a different testing method and set of assumptions. Rochester's largest employer believes that photographs displayed in the home are not subject to as much light as does Wilhelm Imaging Research and its clients. This, in turn, affects the calculations on photographic longevity. A different set of assumptions are made by the Image Permanence Institute at Rochester Institute of Technology, a non-profit independent testing lab that also tests photographic materials and conducts other long-term tests. This picture might degrade in a matter of years rather than decades, he said.

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