

Goeco Ink Fade Test

Explanation

To test the colorfast-ness of Goeco inks, I painted a stripe of each color onto Arches 140 lb Soft Press Watercolor paper. I then covered all but a small portion of the ink with a black metal sheet and put the paper in a South-facing window (In Los Angeles). Each month, for six months, I moved the metal down to expose more of the ink sample to the sun. The test lasted from April through September, 2001.

In this way, the top-most portion of each sample received six months of daylight, while the bottom-most portion received none (for comparison). The samples were then scanned and the scans optimized to show color shift and fading as best as possible on a normal computer monitor (No, the color won't necessarily be accurate, but you should at least be able to get an idea of color shift over time).

My observations of each color are on the next pages. Keep in mind that each month had different weather, so some sections had more light than others [it's not THAT scientific].

A line is drawn across the page to indicate each month's exposure to light.

Remember, this is accelerated aging. If you keep your prints indoors, and out of direct sunlight, you can expect the colors to last substantially longer without change. But, eventually (possibly after several years), you will see your colors fade and shift in color in a way similar to what is shown on the scanned images of this document.

Scan for these colors is on next page.

Color Test Results

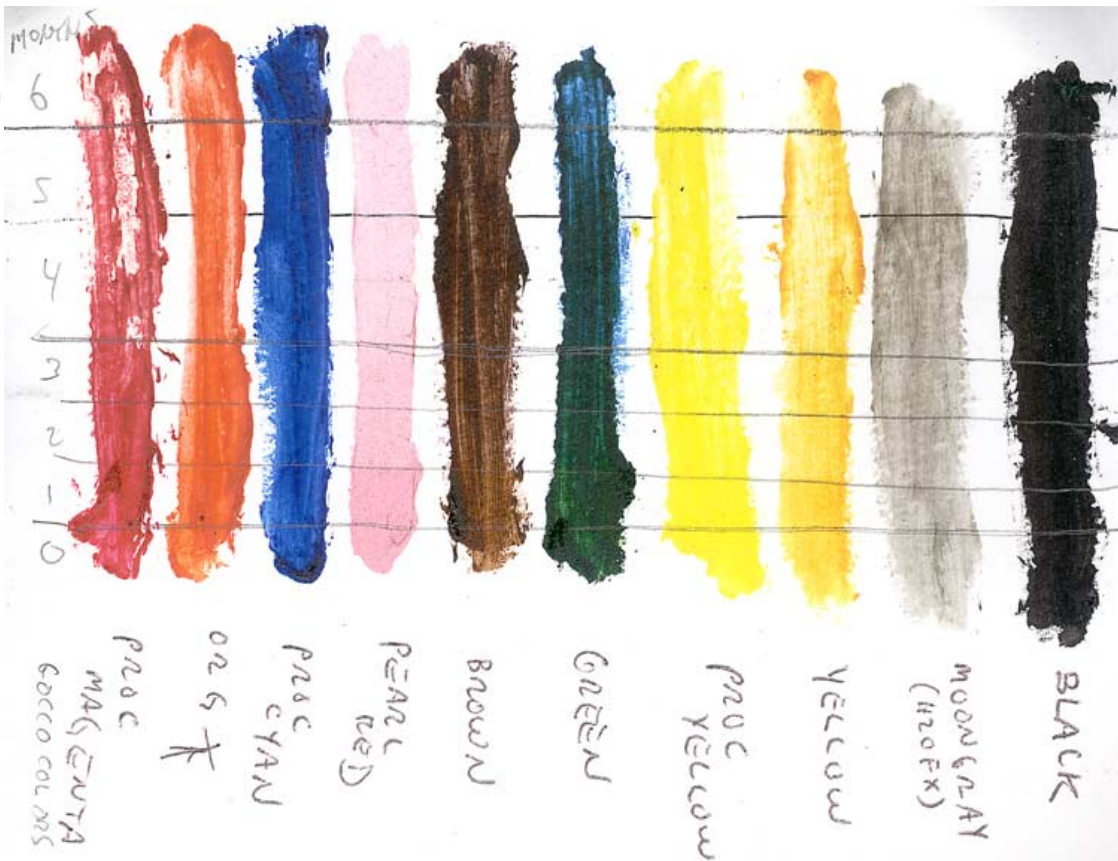
Color	Rating	Comments
Process Magenta	1	Slight fading exhibited after 4 months
Orange	1	Slight fading after 4 months, slight red tone shift
Process Cyan	1	Slight fading after 6 months
Pearl Red	2	Slight fading after 3 months, but about 1/2 the color density at 6 months
Brown	2	Some darkening after 3 months, loses red/yellow tonality as well
Green	2	Noticeable shift to blue after 4 months (yellow component fading)
Process Yellow	2	Some fading at 3 months, about 3/4 color density at 6 months
Yellow	2	Color shifts to an orange/red tone after 2 months
Moon Gray	1	Slight darkening after 2 months
Black	1	No change

Ratings: 1: reasonably archival, minimal fading and no color shift
2: some fading displayed, minimal color shift
3: substantial fading and/or color shift (not at all archival)



Six months exposure to sun

No exposure to Sun.



Scan for these colors is on next page.

Color Test Results

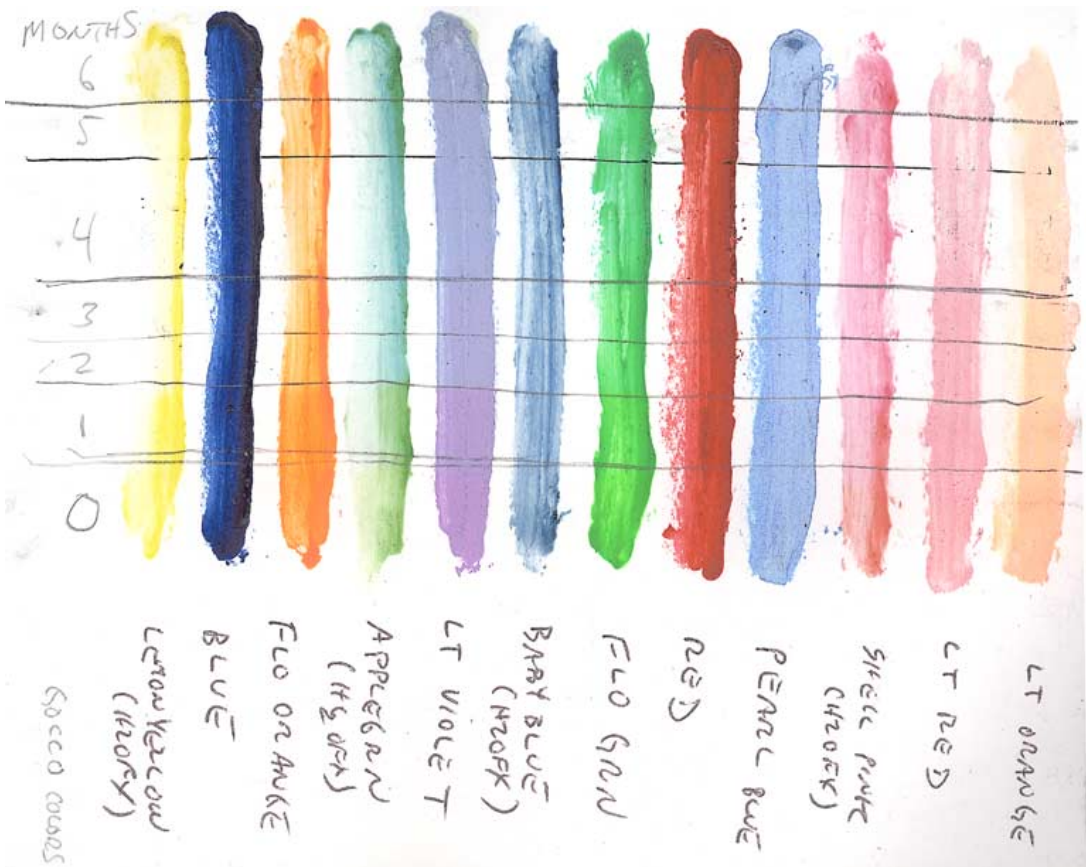
*Refer to ratings on page 2

Color	Rating	Comments
Lemon Yellow	3	Light coverage fades in 1 month, and disappears within 3 months. Heavy coverage fades and exhibits a color shift to green through time.
Blue	1	Slight fading after 3 months
Flourescent	3	Moderate fading at 2 months, substantial fading at 6 months. Yellow color shift exhibited as well.
Apple Green	3	Slight fading at 1 month, Severe fading and blue color shift after 2 months.
Light Violet	3	Slight fading at 2 months, color shift to blue after 4 months (Violet component fades).
Baby Blue	1	Slight fading at 2 months, fairly stable after that.
Flourescent Green	2	Color shift to blue/green after 2 months (yellow component fades)
Red	1	Slight darkening after 4 months.
Pearl Blue	1	Slight fading after 6 months.
Shell Pink	3	Some fading at 1 month, fairly stable after 3 months, (red component fades).
Light Red	3	Noticeable fading at 4 months, less than 1/2 density at 6 months.
Light Orange	3	Some fading at 3 months, substantial fading at 6 months. Yellow color shift exhibited as well.



Six months exposure to sun

No exposure to Sun.



There are standards for testing colorfastness of paints and inks. I did not follow them in this test, as I did not have the proper resources (or care, for that matter). If you display your prints indoors, out of direct sunlight, you can expect several years before fading or color shifts are evident.

If you use quality inks or paints, they will generally have been tested and have permanence ratings on them. Unfortunately, as of this writing, Riso hasn't seen fit to supply such information for their Gocco inks. So, I tested them myself. What these results mean is, if you want your art to look the same in twenty or fifty years as it does now, limit your ink choices to the ones that don't fade much, and certainly avoid the ones that shift in color. Also, be sure to use a good quality, archival substrate (what you're printing on-paper, glass, whatever)

Things that will effect the longevity of your prints:

Light (Ultraviolet light does the most damage-UV protective glass or plastic will help prevent fading more than most anything else).

Substrate should be pH neutral. Use archival quality paper, cloth, glass, whatever. If your inks last forever but what they're stuck to disintegrates, it's just as bad.

Humidity and temperature both effect the life of your prints. Cool and dry is the rule (but not too cool or dry). Pollution will also damage your prints. Just a layer of dust will eventually ruin a print. Keep them clean or covered.

Just take reasonable care of your prints. Normally, if you don't [specifically] light a print, it will only receive about 1/1000th the amount of light that it would in full sun. Even so, it adds up over time. Hopefully, you know as much as you need to now about this subject. If not, there are numerous resources available in art shops that deal with archival preservation.

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