These tips and demos pages are copyrighted. However, please feel free to print/download the PDF for your personal use. They are not to be duplicated in any form or reproduced in quantity without my permission. If you have questions or need more information, please e-mail me: elf@fountainstudio.com

Watercolor Paints: Qualities & Characteristics

You’ve just bought your first tubes of professional quality watercolor paints. Great! Once you get to know them well, your color mixing should be easier, with more predictable results, and your paintings will benefit from your added knowledge. What do you need to know about the colors you’ve just purchased? They all fall under the general category of watercolor, but they each have unique qualities.

Are you a painter that likes to build up your paintings slowly with layers of luminous color? Then you need to use the most transparent pigments you can find. Are you a plein-air painter, who wants to make gutsy, expressionistic works? Then you may want pigments that are a bit more opaque, and sedimentary. Do you keep having trouble with a particular color “taking over” every color mixture you make? Do you like to lift out color by rewetting portions of your painting and blotting it? You need to know about staining and tinting strength. For a top-notch discussion of all these qualities (and much more), Handprint.com has the best information available online. Bookmark the site, because you’ll want to go back from time to time.

All of these qualities are things you can discover with a little testing. I do these tests every time I buy a new tube of paint. There are differences between brands, even when the color name is the same. Here’s how to test your paints.

Transparency
You can easily discover the relative transparency of each of your colors. Use a permanent magic marker to draw a wide (about 1/4”-1/2”) line on a piece of watercolor paper. Let your marker line dry completely. Now, for each color you want to test, mix up a fairly saturated brushful of your paint color, and brush it across the marker line. Do this for each color you have, labeling them with the manufacturer (note if student or professional grade), and the color name and number. Let your samples dry, then look carefully at the area where the paint overlaps the black line. If the color “disappears” when it overlaps the line (i.e. you just see a black line), we consider that color to be very transparent. If you can see a deposit of paint on top of the black line, we consider that particular pigment color to be opaque. Some colors are in between - semi-transparent or semi-opaque.

In the sample above, most of these cool reds are transparent; the least transparent one is the Permanent Rose [Winsor & Newton Cotman]. You can see that it leaves more of a deposit on top of the black line than the other colors do. In this particular case, one might guess that the opacity of that color is the result of filler in this “student grade” paint - the professional grade of permanent rose is quite transparent regardless of manufacturer.
In the right samples, the warm reds, particularly the cadmiums and Winsor & Newton’s Bright Red, are fairly opaque. The Sennelier brand of Cadmium Red Pale nearly covers the black line. It is very opaque.

Of the green-leaning yellows, many are somewhat opaque, with the Sennelier Cadmium Yellow Lemon being the most opaque. Winsor and Newton’s new Transparent Yellow is very transparent in thinner, less saturated washes. Opaque colors do not glaze or layer well! Use opaques for more direct painting styles...put them down and leave them alone...don’t paint over them with another color, as they tend to get muddy and chalky looking if overworked.

Staining Quality and Tinting Strength

The staining quality of your pigments is also something you need to be aware of. This has to do with whether or not the paint can be rewet once dry and blotted or “lifted” lightening the value - in some cases to nearly white paper.

In many cases, paints that are extremely staining are also pigments that have a lot of tinting strength, which means that they can easily overpower some colors, and it only takes a small amount of them to make a big color change in a mixture.

The test for staining is easy. Paint a patch of each color you want to test, labeling the patches as you go with manufacturer name, grade (student or professional), and color name and number. Let the patches dry. With a stiff brush (oil painting brushes work well) wet with clean water. Stroke 20 times* back and forth over a patch. Blot with paper towel or tissue. Rinse the brush and repeat for each patch you’ve painted. Compare your samples. Some (like the Winsor & Newton Rose Madder Genuine in my samples at left) will lift nearly completely off the paper. Others, like Alizarin Crimson by Grumbacher don’t come off well at all. Be consistent with how many times you scrub back and forth over your patches.

If you like to be able to lift out whites or lighten areas after the paint is dry, you need to use paints that don’t stain heavily. Alternatively, you can try Winsor & Newton’s Lifting Medium. You paint this medium on your paper before applying any color, and it allows you to lift any color, regardless of whether or not the pigment is staining. I have not tried this medium, so can’t say for certain how well it works.
Sedimentary or Granulating Quality

Finally, there is another paint quality you need to know about. Sediment. Every paint is made from finely ground pigment (color) particles plus binders, usually gum arabic. Depending on what material is used for the colorant and how the pigment colorant is ground, these particles can be larger or smaller, heavy or light. When you thin your paint with water, the paints that have heavier particles will tend to separate from the water and binder and “sink” quickly onto the paper surface. This characteristic is called granulation. You can see this happen right in your palette. Manganese blue is a very good example of a pigment that is very sedimentary. When you mix it with a color that is non-sedimentary (or has lighter particles that stay suspended in water better) like transparent yellow, the mixture will tend to separate out, with the heavy particles of manganese blue sinking and the lighter yellow color predominating in the remainder of the wash. There is a demo of this on my tips page Using Sedimentary Pigments.

To test for sediment or granulation, you need to make a half inch patch of a color on your test paper, then fill your brush with water and quickly extend the patch to about an inch or more. Then tip the paper back and forth so that the particles will run from the more saturated part of the patch into the more watered down part. You can tip the paper back and forth a couple of times. Let your sample dry, and repeat for each color you want to test. When the samples are dry, some of them will look much “grainier” and have a more mottled appearance in the lower portion of the patch, and some will just look lighter in value but smooth. The ones with the most mottled, grainy look are the ones with sediment or granulation. In my samples above, only the Winsor & Newton Rose Madder Genuine, and the Permanent Rose (Holbein) had any appreciable sediment or granulation.

Do these tests on the paper that you use most often for your paintings. The tests will look different on hot press, cold press and rough papers. If you really want to know whether the granulated appearance is due to the paint and not the paper, use hot press for these tests. It has no pockets or depressions for the paint particles to settle into, so any granular appearance is due to the paint itself.