

Learn how to find your way among the myriad of mediums and identify those best suited to your purposes.



exploring OIL MEDIUMS

BY MICHAEL CHESLEY JOHNSON

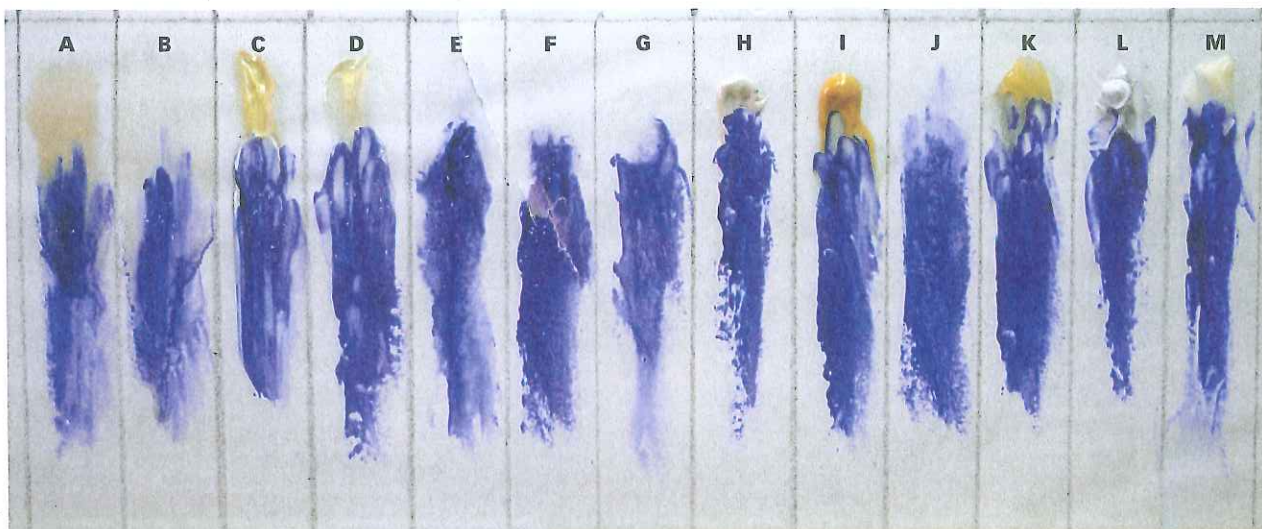
IN MY WORKSHOPS, oil painting students often ask about mediums: what are they for, and when should they be used? Mediums are a confusing topic for students because there are so many—some common and others arcane—plus an ocean of information on their proper uses. There's no need to feel lost at sea, though. With a few basic principles, you can navigate the waters—or mediums—with ease.

What Is a Medium?

First of all, don't confuse mediums with thinners and brush cleaners. Thinner is used to thin paint so you can apply it as a wash of color or as a toning layer; brush cleaner is used for cleaning brushes. Examples of thinners or brush cleaners are Gamblin Gamsol, Martin/F. Weber Turpenoid, and turpentine. Although you can use any of these products alone as a medium, they aren't recommended for this use because they dilute and weaken the paint film, leading to cracking and flaking.

A medium has a different purpose. Depending on which one you use, it can make paint more fluid so you can more easily create fine lines or sign your paintings, or it can add texture for visible brushstrokes or even impasto; it can make paint more transparent for colorful glazes that glow like stained glass; it can speed up the drying time of paint for artists who like to work in layers, or it can slow down the drying time for portraitists who need time to blend effects; finally, it can give the finished work either a glossy or a matte finish, which can affect the painting's overall mood or feeling.

A medium also shouldn't be confused with a varnish as a means of providing a protective finish, nor should artists spread a layer of medium over a finished painting to bring up the gloss. Doing so makes it difficult, if not impossible, for conservators to later remove this layer of medium without also removing delicate glazes and paint. Varnishes are designed to stay on top of the painting so they



can be removed for cleaning; mediums are meant to be an integral part of the paint layer.

Since using anything other than paint straight out of the tube complicates the painting process, I prefer whenever possible to use nothing but paint in my paintings. Sometimes, however, I need to change the characteristics of the paint, and that is what a medium is for.

Simple Mediums

“Simple” (my word) mediums are drying oils—oils that harden over time when exposed to air (like linseed oil) as opposed to nondrying oils, which do not (like almond oil). Usually a drying oil serves as the “vehicle” or the liquid component of paint that suspends and carries the pigment particles. But these oils can also be used successfully as mediums when used in small amounts:

Refined linseed oil, which comes from flaxseed, is the most common vehicle and has been used successfully as a medium for centuries. Although there are several different varieties of refined linseed oil that can be used for oil painting, cold-pressed, which has been subjected to rigorous purification processes, is the most preferred. Refined linseed oil makes the paint dry more slowly and is thus good for painting wet into wet. If you have a paint that’s too stiff as it comes out of the tube, a drop or two of linseed oil mixed thoroughly with the paint will loosen it up. Two notes of caution, though: first, use only small amounts because too much may cause the final paint film to wrinkle; second, linseed oil tends to yellow over time; walnut or safflower oil, two other drying oils that can be used as mediums, do not yellow as much but are somewhat prone to cracking. *Uses: thinning paint, slowing drying time, increasing gloss*

Test: Transparency and Gloss

Key

- A:** Chroma Archival oils fat medium
- B:** Chroma Archival oils lean medium
- C:** Gamblin Neo Megilp
- D:** Gamblin solvent-free gel
- E:** Michael Harding Dammar glaze medium
- F:** Michael Harding resin-oil wax medium
- G:** Jack Richeson Shiva imitation copal painting medium
- H:** Natural Pigments Rublev Velázquez medium
- I:** Natural Pigments Rublev Venetian medium
- J:** Martin/F. Weber oil painting medium
- K:** Martin/F. Weber Res-n-gel quick-drying extender oil
- L:** Golden Williamsburg impasto medium
- M:** Golden Williamsburg wax medium

To test transparency, fluidity, and gloss, I laid out columns on a sheet of palette paper and put a small sample at the top of each. For each sample, I mixed in a small amount of ultramarine blue and then dragged the mixture down with a brush. It’s a little hard to tell these qualities from a photo; refer to Sampling of Mediums (page 53) for specifics—or conduct a similar test with your mediums.

Stand oil is refined linseed oil that has been heated to make it thicker. The oil is partially polymerized, which means that its molecules have begun to link into long chains. This heavy-bodied product dries even more slowly than linseed oil and has the effect of leveling out brushstrokes. The final dried film of stand oil is more durable than a film of dried linseed oil. Also, stand oil yellows less than linseed oil, dries to a glossier finish, and is excellent for glazing when mixed with solvent and varnish. *Uses: thinning paint, slowing drying time, increasing gloss and transparency, leveling brushstrokes*

Like stand oil, **sun-thickened linseed oil**



ABOVE: So many mediums! These products, generously provided by seven manufacturers, are but a partial sampling of the mediums on the market today. The brands represented in this picture are (A) Martin/F. Weber, (B) Gamblin Artists Colors, (C) Chroma, (D) Golden Artist Colors, (E) Williamsburg Oils, (F) Jack Richeson Shiva, (G) Michael Harding Paints. Photo by Al Parrish

has been thickened, but by exposure to sunlight rather than heat. Sun-thickened linseed oil dries somewhat faster than stand oil, which is helpful if you're glazing while short on time; with sun-thickened oil, you can cut the drying time in half. *Uses: thinning paint, increasing gloss and transparency, speeding drying time, glazing*

Complex Mediums

As painters delved more deeply into the mysteries of oil paint, their needs became more complex. They wanted paint with more texture or with less texture; with a faster drying time or a slower drying time; with more gloss or less gloss. The simple mediums described previously didn't cut it, so artists concocted new ones. For example, painters discovered that tree resins, such as damar (also spelled "dammar"), added to stand oil would increase gloss dramatically and that adding a drier (siccative), such as cobalt salts, would make paint dry rapidly. Some of these recipes have been lost or become shrouded in alchemical mystery, and many modern artists have gone to great lengths to "rediscover" these formulas (Maroger medium is perhaps the best-known example of a "rediscovered" formula). Nevertheless, many of these mediums are available today, offering a wealth of options. Following are just a few common ones:

A **light-drying oil** composed of linseed oil mixed with turpentine (turps) or odorless mineral spirits (OMS) makes paint more fluid, a property that's good for details like branches or

signatures. What's more, the addition of turps or OMS makes the medium relatively quick drying and creates a matte finish. Increasing the proportion of turps or OMS to the linseed oil increases the effects of these properties. *Uses: thinning, speeding drying time, decreasing gloss, increasing transparency*

Three-part medium is virtually the same as light drying oil except that damar varnish is used to bring up the gloss. This traditional medium is popular and seems to be in all the recipe books. Proportions vary, but it's important that turpentine be used and not OMS; damar, which must stay in solution, will not dissolve in OMS. (See *Make Your Own Medium*, page 54.) Additionally, this medium works well as a glazing medium. *Uses: thinning paint, increasing gloss, speeding drying time, glazing*

Maroger medium, a soft gel, was for many decades the "holy grail" of mediums. For ages, artists had been looking for a way to duplicate the look and feel of old master paintings. In 1948, painter Jacques Maroger published *The Secret Formulas and Techniques of the Masters*, in which he claimed to have discovered a medium used by old master artists that made paint fluid, but not runny, and speeded up drying time. Critics today doubt whether the medium is truly archival and, in that traditional Maroger is made with white lead, decry its toxic quality. More recently, paint makers have created non-toxic Maroger substitutes, such as Gamblin Neo Megilp, that don't contain lead and are archival. *Uses: thinning paint, speeding drying time*

Sampling of Mediums

When I was conducting research for this article, I asked several manufacturers to supply me with samples of mediums. From the overwhelming number of mediums I received (see image on page 52), I selected the following 13 with which to conduct the tests in this article:

CHROMA (www.chromaonline.com)

Archival oils fat medium: a syrupy, heavy-bodied medium that promotes faster drying of oil paint and gives control over detail; recommended for experienced painters who work all day on the same painting; made with low-odor solvents and alkyd resin

Archival oils lean medium: a thin, general-purpose, alkyd resin medium that feels oily but dries with a low sheen within a day; increases flow and transparency; allows artists to work the surface of a painting for a full day without the paint tacking up; made with odorless solvents and alkyd resin

JACK RICHESON Shiva (www.richesonart.com)

Imitation copal medium: a somewhat viscous medium that improves the flow of paint and speeds drying time; according to the manufacturer, can also serve as a final varnish; made with turpentine

MARTIN/F. WEBER (www.weberart.com)

Oil painting medium: a formulation of the traditional three-part medium used to create fluid color with enhanced gloss; made with linseed oil, damar varnish, and turpentine.

Res-n-gel quick-drying extender oil: a gel that makes color more transparent, adds brilliant gloss, and holds detail and impasto shapes; good for glazing and speeding of drying

MICHAEL HARDING PAINTS

(www.michaelharding.co.uk)

Dammar glaze medium: a traditional glaze medium designed to create gloss and a sense of depth within oil paint layers; made from damar resin, stand oil, double-rectified turpentine, and cobalt siccative for drying

Resin-oil wax medium: lends a satin sheen and gentle impasto to paint layers; a soft painting paste made with beeswax, damar resin, and stand oil

GAMBLIN ARTISTS COLORS

(www.gamblincolors.com)

Neo Megilp: a contemporary formulation of



megilp (or Maroger) medium; a soft gel that maintains the body of oil colors while increasing their transparency and giving them a buttery feeling; remains workable for hours and gives colors a satin gloss; made with alkyd resin and odorless solvents

Solvent-free gel: gives colors more flow and transparency, yet holds the shape of a brush mark; has a moderately fast drying rate and increases gloss; made from safflower oil and alkyd resin (For more information, see Learn More Online, page 54.)

GOLDEN ARTIST COLORS Williamsburg Oils (www.goldenpaints.com)

Impasto medium: a gel that extends paint without altering consistency; can be used to create texture; made of linseed oil, chalk, and barium sulfate

Wax medium: a pastelike compound that gives a short, buttery texture to paints, increases transparency, and dries to a satin sheen; made of beeswax, damar resin, and refined linseed oil

NATURAL PIGMENTS Rublev

(www.naturalpigments.com)

Velázquez medium: thick medium used to make oil colors "long" for finer detail and impastos ("Long" means a paint levels out and doesn't show brushstrokes; "short" means a paint is buttery and can stand in peaks.); increases transparency slightly without affecting color temperature; made with calcite or chalk and linseed oil, but no solvent

Venetian medium: another thick medium, this one used to aid glazing; fast drying; contains crystal glass particles that give brilliance to the paint film; made with leaded-crystal glass, wax, walnut oil, and turpentine

ABOVE: From the many samples manufacturers sent me, I chose to test these 13: (back, left to right) Chroma Archival oils fat medium, Martin/F. Weber oil painting medium, Jack Richeson Shiva imitation copal painting medium, Chroma Archival oils lean medium, Golden Williamsburg wax medium, Gamblin Neo Megilp; (middle jars, left to right) Michael Harding resin-oil wax medium, Michael Harding Dammar glaze medium; (front tubes, left to right), Golden Williamsburg impasto medium, Natural Pigments Rublev Velázquez medium, Natural Pigments Rublev Venetian medium, Martin/F. Weber Res-n-gel, Gamblin solvent-free gel

Photo by Al Parrish

Make Your Own Medium

Until recently, most artists made their own mediums from simple recipes, such as this one for a traditional three-part medium. This product works well for thinning paint as well as for glazing:

- 1 part linseed oil
- 1 part damar varnish
- 1 part turpentine (use pure gum spirits of turpentine or double-rectified turpentine)

Combine equal parts of the ingredients in a glass jar, stir thoroughly, and cover. You can replace the linseed oil with stand oil, which will give you a thicker mixture that dries to a glossier finish. Add a little more turpentine if the medium is too thick. Don't use odorless mineral spirits (OMS) in place of turpentine; damar won't dissolve in OMS.

Test: Textures of Gel Mediums

I took the more paste- or gel-like mediums and added a little ultramarine blue to see how they mixed and to play with the texture. I put dabs of medium on palette paper and used a palette knife to mix in the color. Golden Williamsburg wax medium (lower right) was the stiffest. Also notice that the two light, opaque mediums—Natural Pigments Rublev Velázquez (upper middle) and Golden Williamsburg impasto (lower middle)—lightened the blue.



TOP ROW, LEFT TO RIGHT: Gamblin solvent-free gel, Natural Pigments Rublev Velázquez medium, Natural Pigments Rublev Venetian medium

BOTTOM, LEFT TO RIGHT: Martin/F. Weber Res-n-gel quick-drying extender oil, Golden Williamsburg impasto medium, Golden Williamsburg wax medium

Wax medium gives paintings an overall matte finish and adds body and texture, allowing for impasto effects. Usually this pastelike product is made with beeswax combined with linseed oil, turpentine, and perhaps damar varnish (recipes vary among manufacturers). *Uses: adding body, speeding drying time, achieving a matte finish*

Alkyd Mediums

An addition to the more traditional oil painting mediums already discussed, alkyd mediums have recently come on the scene. These modern mediums are designed primarily to speed the drying time of oil paint. Based on the same chemistry as alkyd oil paints and fully compatible with traditional oil paints, these mediums' drying component, an alkyd resin, is made from an oil, typically soybean oil. There are as many alkyd mediums as there are traditional formulations, and they've been designed to fill many of the same needs. Alkyd mediums have proved to be a valuable tool in the oil painter's toolbox. Check with the manufacturers for types and properties.

For more information about painting with alkyd oils, see *Learn More*, below. For more specific information about 13 brand-name simple, complex or alkyd mediums, see *Sampling of Mediums*, page 53.

Water-Miscible Mediums

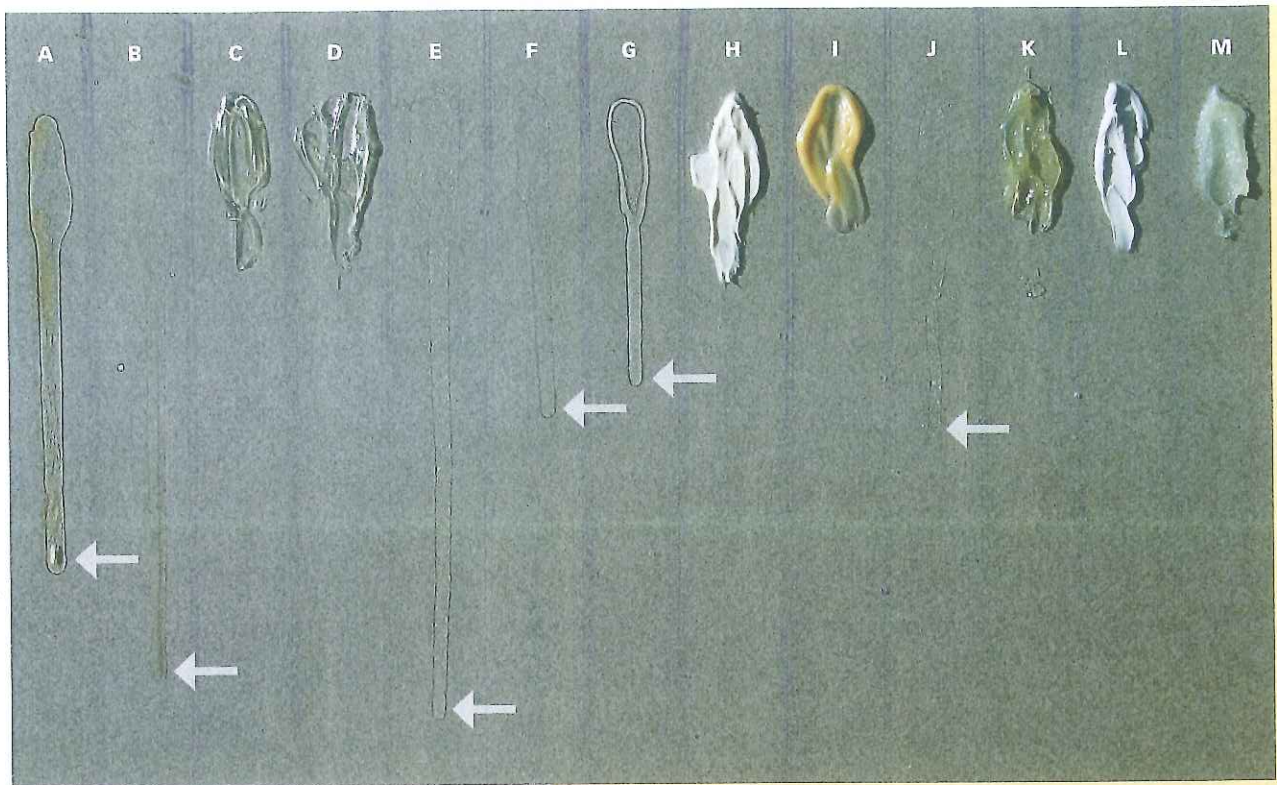
Finally, there are also mediums for water-miscible (or water-mixable) oil paints. Although these paints are genuine oil paints, they're designed to clean up with water. They're not, however, designed to be thinned with water. For that, you need a medium. Each manufacturer of water-miscible oil paints has a medium specific to its brand.

Learn More ONLINE

Find links to the following free articles from *The Artist's Magazine*, at www.artistsnetwork.com/learnmore2014.

"Paint for the Impatient," by Michael Chesley Johnson (December 2011); how to paint with alkyd oils

"Gel Medium Goes Green" by Chris Saper (April 2014); Road Test column on Gamblin solvent-free gel medium



When to Use a Medium

You've probably heard that the proper way to create an oil painting is to proceed "fat over lean." This means that the beginning layers of paint should have less oil in them than the succeeding layers. Typically, the first layer of paint, usually the block-in or imprimatura, is thinned with OMS or turpentine, whereas the next layer may be pure, undiluted oil paint followed by paint to which a medium has been added. Painting this way prevents cracking of the dried paint film.

The reasoning behind this sequence is that mediums are considered "fat." They always contain oil, so adding any medium to oil paint makes it fatter. Therefore, in keeping with the "fat over lean" rule, use medium in the final layers of paint. Generally you'll want to add only enough medium to make the paint flow better, as too much medium dilutes color and makes it more transparent. In some cases though, for instance, if you're glazing, this may be the effect you want.

There are countless commercial mediums available for the oil painter—and if those aren't enough, you can make your own. With so many options, you can enjoy exploring the uses and effects of oil mediums for a lifetime.

MICHAEL CHESLEY JOHNSON is a contributing editor for *The Artist's Magazine* and author of the popular book for learning to paint *en plein air*, *Backpacker*

Test: Viscosity

Key

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- M:** Golden Williamsburg wax medium

To test viscosity or flow, I created columns on a sheet of glass with a wax crayon and put samples of each medium at the top. Then I put the glass in a vertical position, which allowed the more fluid (or less viscous) mediums to run. Arrows mark the extent of the flow of the more liquid mediums after a few minutes. You can easily see which mediums flow more readily. The paste- and gel-like mediums didn't flow at all.

Painting: Outdoors with Oil & Pastel. Its two companion videos are available through ArtistsNetwork.tv. Johnson also teaches plein air workshops throughout the United States and Canada. For more information, visit www.michaelchesleyjohnson.com.