

WORKSHOP THREE: PIGMENTS & BINDERS

Carl Plansky, Williamsburg Paint

Pigments and Binders

Paint consists of two things, **pigment** and **binder**.

A **Pigment** is what gives color to paint and in its raw form it is a fine powder.

- Pigments may be classified according to color, use permanence, etc.
- You can classify them according to origin:

Inorganic (mineral)

- Native Earths, ochre, raw umber
- Calcined native earths, burnt umber, burnt sienna
- Inorganic synthetic colors: cadmium yellow, zinc oxide

Organic

- Vegetable: madder
- Animal: Indian Yellow
- Synthetic organic pigments

A **Binder** (such as Linseed oil) is what holds the pigment to a surface.

- Linseed oil dries through the process of oxidation to a strong but flexible film.
- It is the flexible quality of the oil film that allows for its use on canvas.
- Cold pressed linseed oil is generally used in paint making though small proportions of poppy and walnut oils are also used.

A good paint should consist of just paint and binder. Cheap paints contain fillers to make the manufacturing of the paint cheaper. You can tell by the intensity of the color whether filler has been used.

What is the difference between Linseed Oil, Boiled Linseed Oil, Stand Oil, etc...?

Linseed Oil

Linseed Oil is pressed from the seeds of the Flax Plant. It is heated and then refined removing impurities and improves color. A drying oil that dries to a semi-gloss to matte finish, depending on the pigment it contains. It dries relatively slow.

Boiled Linseed Oil

Boiled Linseed Oil is heated to higher temp therefore it has a darker color and is used more for furniture and woodworking purposes and not recommended for painting.

Stand Oil

When Linseed Oil is heated to a higher temp, an internal change takes place. The consistency becomes more like honey. It is not suitable to use to mix pigments but is an interesting medium to use in painting. It has a leveling property that allows it to dry to a smooth enamel like film.

Walnut Oil

Also a drying oil that dries to semi-gloss to matte finish as well. It is darker in color compared to Linseed oil and will rot over time.

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Poppy Oil

A very slow drying oil, that is very clear and dries to a brittle film and therefore recommended to be used in combination with a more flexible oil such as linseed oil.

It is highly recommended to use Linseed Oil as the Binder and medium of choice.

How to mix your own Oil Paint



Here are the tools you will need: Grinding slab which should be a rough tile or some kind, a muller with a sanded bottom, a palette knife, your pigments and a binder such as Linseed Oil.



Put pigment on the grinding slab and add the binder. Start mixing the pigments and the binder together with a palette knife.



Start grinding the mixture with the by Muller to create a smoother and more buttery consistency.

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Keep grinding until you reach the right texture. Each colored pigment is different so mixing times vary. You will get a better idea the more you experiment.

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Books on pigments, color and technique available in the Library:

Artists' pigments: a handbook of their history and characteristics, edited by Robert L. Feller
ND1510 .A77 1986

Formulas for painters, by Robert Massey. **ND1540 .M3**

The painter's craft: an introduction to artists' methods and materials, by Ralph Mayer.
ND1500 .M32 1979

The artist's handbook of materials and techniques, by Ralph Mayer. **ND1500 .M3 1982 & 1991**

The materials of the artist and their use in painting, with notes on the techniques of the old masters, by Max Doerner. **ND1500 .D6213 1984**