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Linseed Oil Cold pressed linseed oil is at the heart of making oil paint. Despite a tendency to yellow it has proven over hundreds of years to make strong durable paints that have many characteristics that many artists like in a paint

[History of paint...](#)
 Besides pigment and oil, the artist needs appropriate solvents.

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Pigment paste Making the pigment paste before grinding. The pigment is mixed to a stiff paste with the spatula, but it does not become paint until dispersal with the muller. Only then does the paste gain the plastic qualities that we call

Oils and Alkyds Changing paint characteristics

Many artist's using modern oil paints presume that they are painting with the same paints as were used by Renaissance masters. That is not really true. Not only are many of the pigments very different but the oils themselves have changed, and the basic characteristics including the way it handles on the brush and on the canvas are markedly different for many reasons including simple changes in taste and skill levels. The Renaissance master was virtually a chemist in his understanding of the materials at hand. They needed to be since all paint was in effect manufactured on the premises from base ingredients. Nor were there the mechanized tools and myriad chemicals to adjust the natural product to a uniform consistency. Today's painter expects to slap some paint onto a surface and start spreading it with carefree and creative abandon. The Renaissance master would not only not have that luxury, but would no doubt be aghast at what is likely to be regarded as disrespect for materials and tradition. The very nature of oil paints 500 years ago dictated that this would have to be so. The materials were often very poor and it was only the careful attention to working with the strengths of the various materials and consciously avoiding the weaknesses that lead to pictures that could survive the ages. It seems quite bizarre that now that we have such high quality materials we tend to put them together in ways that are likely to self destruct in relatively short times.

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Early oil paint Paints with individual characters

Every pigment has a natural tendency to behave in a certain manner that affects and modifies the oil used. Some like the lead based pigments are very beneficial to the oil. Lead tends to make the dried oil paint film more flexible than it would be otherwise, and it speeds the drying of the paint. Little wonder that artist's loved Lead White despite its known toxicity. Burnt Umber was also a fast drier, although it made only a fairly flexible oil paint film. There were other colors however that were much slower in drying, and some that produced oil films that were brittle and very prone to cracking. Ivory Black is an example of that.

Some pigments were variable in their fineness. In an age where all grinding was

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Dispersion Also commonly called grinding, or mulling. This is the hand powered version of the mechanical milling that happens in factories. Mulling is intended to evenly coat every pigment particle with a minimum of oil. It is at this stage that any extenders and other ingredients that the artist prefers to modify the paint is added, although wax will already be in the oil.

[Extenders and additives...](#)

Characteristics of oil paint. [More...](#)



Filling tubes Now you have made beautiful pure paint it is time for testing and filling tubes. The tubes are filled from the bottom and then the hand holding the tube is thumped against the table to eliminate air bubbles. [Testing...](#)

done in the studio by apprentices with hand mullers, it was not possible to pulverize all pigments equally. There was no pigment factory down the road who would supply pigments in ultra fine powders like we have these days, grinding was a mixture of apprentice willingness, and the demands reasonable or otherwise of the studio master. It was inevitable that quality was variable from studio to studio, from batch to batch, and from pigment to pigment. Thus a pigment that is easy to work with like say Venetian Red would end up being a very different sort of paint to a naturally coarse pigment like Egyptian Blue.

The oils used were different too. From the beginning Hemp Oil, Nut Oil, Poppy Oil, and Linseed Oil were all experimented with. Nut Oil was favorite of Leonardo da Vinci but it proved to be unreliable. Poppy Oil was popular because it was light in color. But it was Linseed Oil that became the favorite due to its overall desirable characteristics. It dried faster than the others and made a tough durable paint film. It was normally cold pressed in slow turning stone mills, either horse powered, or windmills. It is a dark oil that results very high in the sort of long molecules that bind most toughly for the strongest paint films. Cold Pressed Linseed Oil from a windmill is still made and sold by Old Holland, the oldest paint manufacturer in the world. It is worth trying for it's many good qualities. Cold Pressed Oil made in more conventional mills is available from other suppliers and is also superior for making paint, however nothing can beat the oil that comes from slow turning stone mills. This oil gives a unique quality to the paint that is enjoyable to use. Many artist's as in earlier centuries may decide it is wise to grind white and delicate blues in Poppy Oil and darker and yellower colors in the Cold Pressed Linseed Oil. This adds to the variety of paint characteristics naturally.

Renaissance oil paint was most noticeable for the individual characteristics of the various pigments and oils used. The maker of artist's paint in the studio often prefers to avoid the addition of dryers and stabilizers so is likely to make paint very similar to that used in the Renaissance in this regard. Be aware that painting with it is a whole new experience.

Modern oil paints Modern ways aren't all bad

Producing a 'short' oil paint has been a desirable characteristic from the early days. A paint that is short has a buttery body. It was soon discovered that a tiny addition of beeswax could help shorten the paint. But what was meant by short has changed in the last 500 years. Renaissance oil paint was not as buttery as oil paint tends to be these days. In the early days paint was generally applied in thin layers. Glazing was normal and impasto played a smaller role in highlights, but as time passed the desire to impasto increased. By the time of Rembrandt his thicker texture was de rigueur. but in subsequent centuries artist's painted more and more alla prima where thicker buttery paint was not only desirable but considered creatively necessary. This coincided with the rise in industrial paint production with the machinery and chemistry to meet artist's demands. The expressive use of brush strokes was born.

Another noticeable characteristic of modern oil paints is their consistency, especially in regard to drying. The Renaissance master didn't need to add dryers to paint as they had 2 colors that could be added to most mixtures that would do the job for them. Darker colors could have a small addition of burnt Umber, and lighter colors and all tints would benefit from additions of the fast drying Lead White. Old master painting was very dependent on the use of Lead White which provides the modern maker of paint in the studio with a dilemma. Few want to take the risks involved with using Lead White, especially when dealing with it as a pigment, yet few also are willing to add dryers intentionally to colors either. Catch 22. There are 2 work around's. First is to use the Cobalt and Manganese colors as pigment colors. They both dry quite quickly, not so fast as Lead White, but there are more colors to use on the palette such as greens, blues, violet and yellow. Avoiding the slowest dryers such as the Cadmium's helps. The modern maker of paint who follows this path finds

themselves in the same position as a Renaissance master - having to think about their materials more as they paint. That is not such a bad thing.

The second work around is to make oil paint with Linseed or Poppy Oil and to use alkyd mediums. This method retains the basic working characteristics of traditional oil paint while speeding drying significantly. It is possible to take this to the next step and grind the colors into alkyd mediums in the first place as described below, but most artist's who want paint to dry this quickly are interested in acrylics rather than oil paint. It does however offer a fast drying option for paints that need to be used in areas exposed to weather and other situations where durability is a major issue.

On the other hand it is relatively easy to use dryers and stabilizers to make paints of similar consistent characteristics to store bought colors. The page [extenders, stabilizers, fillers, and dryers describes these additional ingredients in detail, just click here](#). Their use in paint making is addressed in the demonstration

Alkyds Fast drying oil paint

Alkyd paint characteristics can be summed up as being what you would expect of fast drying oil paints. Paint body and all wet characteristics are similar to traditional oil paint. The difference is principally in the drying. They tend to have shorter open times for working the paint with wet in wet techniques, and arrive at a honey like stickiness within a normal painting session. Often the mixture of Alkyd with traditional oil paint combines the desirable characteristics of each very favorably. It is no accident that the Alkyd painting mediums outsell the paints by a significant factor.

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