

Linseed oil

Linseed oil (also known as flaxseed oil) is one of the fastest drying oils, because it contains about 48–60% of linoleic acid residues (compared to 3–5% for poppy and 2–16% for walnut oil)¹. Linseed oil is obtained from the seeds of flax (*Linum usitatissimum*) under high pressure (both hot and cold pressing are used) followed by refining. Even though all drying oils tend to yellow while drying, linseed oil yellows the most compared to walnut and poppy oil. To obtain the pale and clear linseed oil, linseed oil is bleached under sunlight after extraction. Linseed oil is considered a durable binder in oil paintings, but because of the tendency to yellowing due to ageing. Overall, since the 15th century, linseed oil is the most common drying oil used for the making of oil colours, as additional painting medium and as an additive in emulsions and varnishes.²

Poppy oil

Poppy seed oil (or poppy oil) can be obtained from the seeds of the opium poppy (*Papaver somniferum*) by cold extraction (pale or light golden oil) or hot extraction (reddish oil). Even though it is known from the ancient times, it has been used for painting mostly since the 17th century.² One of the main advantages of poppy oil is that it does not yellow as much as linseed oil, it's also less viscous and does not turn rancid as fast as linseed oil³. However, poppy oil takes longer time to dry and has a higher tendency to crack and resoften after drying. Its properties can be improved by different treatments (e.g. polymerization). Like linseed oil, for obtaining pale poppy oil it can be further sun-bleached. Poppy oil is used to make tube paints and mainly together with light-color pigments (because of its pale colour).²

Walnut oil

Walnut oil is obtained from the nuts of the walnut tree (*Juglans regia*) eventually as refined, hot-pressed or cold-pressed oil³. Comparing to linseed oil, it dries longer and doesn't crack or turn yellow as easily. One of the first records about its usage for paintings originate from the end of the 5th century, when walnut oil was mainly used as a binder in varnishes. However, it is seldom used to make tube colours, because it becomes easily rancid (although alkali-refined walnut oil can be used to reduce this problem⁴). This may be one of the reasons, why it is not so widespread today as it was formerly.²

References

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