



Utrecht Art Supplies

Vegetable Oils: Food Grade vs Artist Grade



Q: If flax oil and linseed oil are basically the same thing as nutritional oils from the grocery, why doesn't art store linseed oil spoil at room temperature? Is something added to keep it from going bad?"

A: The reason artists' linseed oil has such a long shelf life isn't because of what's added, but rather what's removed from the raw oil. Alkali refinement (a 'washing' process) removes most of the free fatty acids, mucilage and other impurities that can lead to rapid spoilage. That's why art supply oils can last a really long time without any noticeable loss of quality.

Unrefined cold-pressed linseed and walnut oil sold for use in painting

might occasionally go rancid in storage, but due to relatively small package sizes most painters probably just use it up before it gets smelly.

Fresh, unrefined oils vary in shelf life. Food-grade safflower oil keeps for about 2 years at room temperature, compared to just a few weeks for flax oil.



Flax seed, the source of linseed oil

How prone a particular oil is to going rancid is due to fatty acid composition. Drying oils are mostly made up of unsaturated fatty acids (e.g. linolenic and linoleic acids). These fatty acids are the components that produce an "off" smell through oxidation, and also what makes oil paint dry. (By comparison, saturated fats like palm and coconut oil have a really long shelf life, but they don't solidify through oxidation, and therefore can't be used as paint binders.)

Rancidity doesn't really affect whether an oil is suitable for use in painting- compared to solidification when a skin forms, much less material has oxidized if the oil is still fluid but just smelly.



Leonardo Da Vinci wrote instructions for making walnut oil where nut meats were washed to remove the skins, then left left to settle, exposed to air for as long as a month. It seems likely the resulting product would be partly oxidized.

Questions? [Ask the Expert](#)

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