

Soy vs. Paraffin Candles - The Great Debate

You may have heard stories recently about the benefits of soy wax, or about how paraffin wax is unhealthy or not good for you. In this article we will examine the myths and rumors and give the straight facts on both soy and paraffin wax candles and allow you to see what the truth and fuss is all about.

Before we start, it is important for you to know what the actual difference is between soy and paraffin waxes, and to see how each are produced. Let's start with paraffin wax, the most common wax to create candles with today. If you purchase a candle that isn't marked as soy, beeswax, or any other special blend of wax, chances are that you have purchased a candle that is made from a paraffin blend of wax.

Paraffin wax is a heavy hydrocarbon that comes from crude oil. Paraffin waxes are produced by refining or separating the waxes out of crude mineral oils. Obtained from the ground, crude oil is a compositionally varied product, consisting of a mixture of hydrocarbons. Another name for crude oil is fossil fuel. Crude oil is transported to refineries where it is refined into finished products by complex processes. One of the many products derived from refining is lubricating oil. It is from the lube oil refining process that petroleum waxes are derived. There are three general categories of petroleum wax that are obtained from lube oil refining. They include paraffin, microcrystalline and petrolatum. Paraffin waxes are derived from the light lubricating oil distillates. Paraffin waxes contain predominantly straight-chain hydrocarbons with an average chain length of 20 to 30 carbon atoms.

Soy wax, on the other hand is made from vegetable matter. Soy wax is a vegetable wax made from the oil of soybeans. After harvesting, the beans are cleaned, cracked, de-hulled, and rolled into flakes. The oil is then extracted from the flakes and hydrogenated. The hydrogenation process converts some of the fatty acids in the oil from unsaturated to saturated. This process dramatically alters the melting point of the oil, making it a solid at room temperature. The leftover bean husks are commonly used as animal feed. The U.S. grows the vast majority of the world's soybeans, primarily in Illinois, Iowa, and Indiana.

So now that you know how both soy and paraffin candles are made, let's take a look at some of the advantages and disadvantages of both types.

There are a lot of myths surrounding soy candles. Most of these are designed to sell soy candles better, and have very little truth in them. A great example is the great "no soot" myth. Sites that sell soy candles love to say that there is absolutely no soot produced with a soy candle. However, there is no truth and all hype to that claim. Absolutely, positively, and most importantly, scientifically, all organic compounds when burned will emit some carbon (soot) due to incomplete combustion. Sooting is primarily a factor of wick length and disturbance of the flame's steady teardrop shape. There is no such thing as a soot-free candle. Further, while soy wax is all-natural and will not produce the thick black soot that you see on some paraffin containers, it does produce soot. An important fact to remember is that not all soot is black. Soot can be a "white soot" that cannot be seen with the naked eye. Soy wax will produce little black soot - unless the candle is improperly wicked, made, or burnt, but it may produce white soot.

But before you get scared of soot, let me tell you, that soot is in fact not harmful to you. Candle soot is composed primarily of elemental carbon particles, and is similar to the soot given off by kitchen toasters and cooking oils. These everyday household sources of soot are not considered a health concern, and are chemically different from the soot formed by the burning of diesel fuel, coal, gasoline, etc. So the myth of "soot free soy candles" is not only inaccurate, but simply an effort by some companies to scare the general public into buying their candles.

With that being said, there are some benefits to purchasing soy wax candles. While petroleum based paraffin wax is a limited resource, soy wax is a renewable resource that is limited only by how many soybeans we can grow. It is also beneficial to farmers who sell soybean crops, as well as lasting almost twice as long as paraffin wax.

However, soy wax is naturally a "soft" wax. While container candles, tealights, and small tarts may be made entirely of soy, it is extremely difficult to make good pillar candles and votives out of 100% pure soy wax. Additives are used to make them better, but in most cases, paraffin wax is still a much better solution for those types of candles. In my own company, Mystickal Incense & More, we use a blend of 50% soy wax and 50% paraffin wax for our free-standing candles.

In the end, both paraffin wax and soy wax are both good choices for candle wax. Neither is more "environmentally friendly" than the other, as there has never been scientific evidence that paraffin wax is harmful to your health in any way at all. It is a personal choice of which type you prefer to use, and both types hold scent and dye just as well. The only benefit that there is in all reality, is that container candles using soy wax do burn longer. And it does benefit the farmers of the Mid-western United States. However, most other claims regarding soy wax are false and/or misleading.

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About the Author

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