

# Spike Lavender: An Overview of the Available Products

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## *Part 1: Introduction*

Spike lavender (*Lavandula latifolia*) is an essential oil distilled from the flowers of a variety of lavender. It has a long history of use as a solvent in oil painting, but also a long history of adulteration: notices in print that spike is often adulterated with turpentine begin in the 17<sup>th</sup> century. Spike lavender has become of interest to painters recently because it is often marketed as a less toxic alternative to turpentine and d-limonene (citrus thinner). This *may be* true if the spike lavender is genuine, because the volatile compounds in flowers (FOCs) are generally considered less toxic than the volatile compounds in turpentine or d-limonene (VOCs). But the long term effects of FOC compounds on the kidneys and central nervous system have not been studied as extensively as those of VOC solvents.

Because they are often therapeutic when pure and used in small amounts, essential oils tend to be seen as far less toxic than they can be when they are impure (adulterated) or used in excess. The increased toxicity of certain common essential oil compounds, such as d-limonene and linalool, when oxidized (exposed to oxygen) has recently been established. Also, while a field of thousands of flowers is natural, putting the essence of thousands of flowers into a small bottle is not. So, even if the spike lavender is genuine, it is important to use it in the smallest possible amounts, and with significant ventilation.

Here we come to the basic issue of spike lavender sold to painters: *none of the mass market products termed "spike lavender" are genuine.* This situation goes far beyond adulteration. At this point, what is called spike lavender in the art materials industry is a mixture of synthetic compounds that mimic the major components of genuine spike lavender such as camphor, eucalyptol (1,8-cineole), and linalool. Synthetic compounds, however, are known to be generally more toxic than their natural counterparts. In most cases the actual make-up of these solvents is known, in one at least it is not. User complaints that these solvents are harsh, cause headaches, sinus, or other respiratory issues are common.

Genuine spike lavender is available through small and specialized essential oil sources. It is between 22 and 26 dollars an ounce (2019) and, because essential oils are so often adulterated at this point, is available with a gc/ms (gas chromatography/mass spectrometry) readout. It always comes in an amber glass bottle which helps protect the contents from oxidation.

## *Part 2: Products from Art Supply Sources*

### **1. Chelsea Classical Studios Lavender Spike Oil Essence**

2019 Price: 2 ounces for 23.00

Percentage of Spike Lavender: Zero

Bottle: Clear glass

Country of Origin: None

Ingredients (SDS) listed as: Hazardous

Misleading marketing: False name, misleading and false statements throughout website.

The Chelsea solvent is the most widely available commercial product, with international distribution. It is marketed in a deceptive way with images of fields of lavender flowers designed to make the consumer believe that it is genuine. But the SDS shows that it is composed of synthetic chemicals. This solvent can be up to 25% synthetic camphor, and synthetic camphor is known to be toxic, not only by ingestion, but also by inhalation.

### **2. The Art Treehouse Oil of Spike Lavender**

2019 Price: 2 ounces for 9.50

Percentage of Spike Lavender: Zero

Bottle: Clear plastic

Country of Origin: claimed as Southern France

Ingredients (SDS) listed as: Non-toxic

Misleading marketing: False name, misleading and false statements in SDS, and throughout website.

This product claims to be 100% spike lavender, this is even stated in the SDS. But the very low price point makes this literally an economic impossibility. This product also comes with an elaborate MSDS by a PhD which concludes that spike lavender does not cause cancer. But the issue with essential oils is damage to the kidney and central nervous system via long term exposure. This product represents the zenith of deceptive marketing in every way excepting its uninflated price. Requests for clarification to Art Treehouse about what is actually in this product have been ignored. At this point nothing is known about what this solvent contains, although it is most likely to be a blend of synthetics similar to that of the Chelsea product.

### **3. Kremer Pigments Spike-Lavender Oil #73800**

2019 Price: 100 ml for 18.00

Percentage of Spike Lavender: Zero

Bottle: Amber glass

Country of Origin: None

Ingredients (SDS) listed as: Hazardous

Misleading marketing: False name

Because this is sourced from Europe, it has a detailed MSDS. This is the most sophisticated of the synthetic solvents in terms of both its components and the use of amber glass.

#### **4. Lefranc & Bourgeois Essence d'Aspic/Oil of Spike Lavender**

2019 Price: 75ml for 16.50, increasingly unavailable in the US

Percentage of Spike Lavender: Zero

Bottle: Clear glass

Country of Origin: None

Ingredients (SDS) listed as: Hazardous

Misleading marketing: False name

Also sourced in Europe, this has a detailed MSDS. This is a mixture of relatively toxic synthetic camphor (bornan-2-one), linalool, (r)-p-mentha-1 8-diene, (scientific code for d-limonene) and various components of turpentine. Its components make it the most potentially toxic of all the products on the market whose make-up is known.

#### **5. Holbein Spike Lavender Oil**

2019 Price: 55 ml for 33.50

Percentage of Spike Lavender: Zero

Bottle: Clear glass

Country of Origin: None

Ingredients (SDS) known as hazardous: borneol, eucalyptol (1,8-cineole)

Misleading marketing: False name

This is the most expensive solvent in this document. The SDS lists its ingredients as borneol, linalool, and eucalyptol, making it unlikely that, in spite of the price, this is sourced from spike lavender (*Lavandula latifolia*).

#### **6. Natural Pigments Spike Lavender**

2019 Price: 28.50 for one ounce

Percentage of Spike Lavender: not possible to determine

Bottle: Amber glass

Country of Origin: None

Hazard Statements: Combustible liquid. Causes skin irritation. Causes serious eye irritation.

May cause an allergic skin reaction

Misleading marketing: Marginally false name

This product comes with a gc/ms readout, but it is for lavandin (*Lavandula grosso*), which is a cross between spike lavender and lavender. The composition is similar to, but not identical to, spike lavender. However, this is the safest of the art supply side solvents because it is a genuine essential oil, and has a lower level of camphor than spike lavender.

### *Part 3: Products from Essential Oil Sources*

#### **7. Lotus Garden Botanicals Organic Spike Lavender**

2019 Price: 26.00 for one ounce

Percentage of Spike Lavender: 100

Bottle: Amber glass

Country of Origin: Spain

Hazard Statement: Possible skin irritant if not diluted in a carrier oil.

Misleading marketing: None

This is an example of spike lavender that comes from a small company dedicated to quality on essential oil marketing track. It is sourced from Spain and is available with a gc/ms readout that, in the example I purchased, listed 48 different compounds. Unlike the solvents from the art supply side, it has a deep, if quite intense, floral aroma, like a spicy version of lavender.

### **8. Mountain Rose Organic Spike Lavender**

2019 Price: 21.50 for one ounce

Percentage of Spike Lavender: 100

Bottle: Amber Glass

Country of Origin: Spain

Hazard Statement: Avoid while pregnant. May cause skin irritation

Misleading marketing: None, but possibly adulterated.

This spike lavender is also available with a gc/ms readout. It is not as detailed, and different than, that of the Lotus Garden spike, and the Lotus Garden Spike has a significantly deeper aroma. This may be a genuine essential oil, but also may have some addition of mineral spirits. It may also be a from a lower grade of flowers, a less careful distillation process, or from a mixture of spike lavender with Spanish lavender.

### **9. Now Foods Spike Lavender Oil**

2019 price: 14.99 for once ounce

Percentage of Spike Lavender: Unknown

Bottle: Amber glass

Country of Origin: None

Hazard statement: Not for internal use. Natural essential oils are highly concentrated and should be used with care.

Misleading marketing: Claims to be genuine

This is an example of an essential oil from the lower end of that marketing track. This type of product does not come with a gc/ms readout. The label claims it is 100% pure spike lavender (*Lavandula latifolia*), but this is economically impossible. It may be a blend of less expensive essential oils, or may contain chemical extenders, or both.

### *Part 4: Conclusion*

The art supply side has invented a toxic synthetic solvent that is being deceptively marketed, replete with images of blooming lavender fields, as at least “safer,” even as “non-toxic,” with no actual actual data to back this up given that the solvents are 100% synthetic. In other words, they may be safer than turpentine or d-limonene, but they may not, and many contain percentages of both of these solvents in any case. But the demand for a safer solvent, in spite of the fact that solvent is optional in a traditional (non-20<sup>th</sup> century) oil painting practice, means that this type of solvent will, in all probability, continue to be marketed. Sellers that are willing to provide a gc/ms readout provide the only remaining way to purchase genuine spike lavender.