In light of the recent FDA statement regarding e-cigarette test results, many of our customers have been asking us about our ingredients. At White Cloud we take pride in the research and development of our exceptional products, and we want you to be an informed consumer.

Whilst we would never suggest that regulation developed through the FDA is unbalanced in any way, the tobacco companies are a great revenue source for the government and our once small industry is becoming a potential threat to that revenue; unless the FDA regulates electronic cigarettes in a way that protects that tobacco-based revenue.

### Four Primary Ingredients

in White Cloud’s premium, USA-made e-liquid are:

- **84.6% - 92% Propylene Glycol and Glycerol**
- **0% - 5.4% Nicotine**
- **8% -10% Flavorings**

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**Propylene Glycol (PG)** Propylene Glycol (or “PG” as it is commonly referenced in industry circles), is used in electronic cigarettes as an excipient (carrier) for the nicotine and flavorings, producing a vapor upon exhaling.

According to the FDA, "Propylene glycol is metabolized by animals and can be used as a carbohydrate source . . . There is no evidence in the available information on propylene glycol . . . that demonstrates, or suggests reason to suspect, a hazard to the public when they are used at levels that are now current or that might reasonably be expected in future."

**Vegetable Glycerol (VG)** As with PG, Vegetable Glycerol (or “VG”) is used as an excipient in electronic cigarettes.

VG is a plant-based carbohydrate and, as with PG, produces a vapor upon exhaling. Often, PG and VG are combined in varying proportions to produce different balances of flavor and vapor. White Cloud utilizes mixes of approximately 80% PG and 20% VG in our products, as it has proven to be an ideal combination for flavor and vapor production.

VG safety is pretty much unchallenged and studies demonstrate that it is non-carcinogenic. Likewise, both PG and VG are widely used in many industries, including pharmaceutical, cosmetic and food.

 whilst most scientists agree more research is probably needed to assess the long-term impacts of PG and VG inhalation, currently available literature for exposure by inhalation suggests there is no cause for concern.

**Nicotine** is a naturally occurring alkaloid (containing nitrogen) found in tobacco plants. It can be found in other plants too, but it’s most concentrated in tobacco.

Although Nicotine can be synthetically manufactured, the nicotine in electronic cigarettes is all extracted from tobacco plants. However, at White Cloud, we maintain such high purity standards, any residual chemicals from the tobacco plant are at trace levels only.

The well-documented pharmacological effects of nicotine are one of the main reasons (but not the only one) that people use tobacco and nicotine products.

Most people understand nicotine has addictive properties, but don’t realize it also has a stimulant effect on the brain, activating receptors and releasing chemicals associated with mood changes. Actually, nicotine acts as both a mild stimulant and relaxant.

At high doses, nicotine is toxic and could be fatal if a large dose is, for instance, swallowed in one quick delivery. Generally, however, the common side-effects of overdosing on nicotine include dizziness, nausea and vomiting.
Flavorings

**E-cigarette Flavorings** The flavorings that we put in to our electronic cigarettes help to give our products their distinctive taste, but they are in no way used to make the products more attractive to anyone under legal age.

All of the flavorings that we use are food-grade, and have been approved for use by the FDA. Though there are a number of flavored products in our portfolio, it tends to be those closest to traditional cigarettes (i.e. tobacco and menthol flavors) that remain the most popular among customers.

All flavors used in the production of White Cloud Electronic Cigarettes are food grade products processed, packaged, stored and transported in strict accordance with all standards set and required by Good Manufacturing Practice.

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**MYTH:** E-Cigarettes include ingredients that cause cancer.

The FDA published a statement that e-cigarettes may contain nitrosamines which have been cited as a possible cause of cancer in certain lab results, but the studies are inconclusive.

**FACT:**

Nitrosamines naturally occur in the form of proteins under certain acidic conditions, such as that when meats, fish, cheese, or beer are consumed in the human stomach.

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**Propylene Glycol & Glycerol:**

**Applications & Use:**

- As a solvent in many pharmaceuticals, including oral, injectable and topical formulations
- In saline solutions
- As a solvent for food colors and flavorings
- As a moisturizer in medicines, cosmetics, food, toothpaste, mouth wash, and tobacco products
- In electronic cigarettes to deliver vaporized nicotine
- As a food additive, labeled as E Number E1520
- In smoke machines to make artificial smoke for use in firefighter’s training and theatrical productions