The Green Buddha Patient Co-op Testing FAQ

The Green Buddha Patient Co-op performs both quality and safety testing on its product. We believe all medical cannabis dispensed in our state ought to be fully tested for contaminants. In fact the first requirement of dispensing medicine should be "do no harm." In the current Washington State unregulated (illicit) medical cannabis market most medical cannabis is not safety tested. Perhaps due to the advertising imperatives of most dispensaries combined with the paucity of data there's a public misconception that the cannabis sold is safe. Quite a number of the medical collectives will claim "100% tested meds" by which they mean that all their product is tested for THC potency, and none of their product is tested for pesticides, etc.

Quality or potency testing involves both cannabinoid and Terpenoids testing. Cannabinoids such as THC, CBD, CBN, CBG, are the primary medicinal components of cannabis while Terpenoids are the volatile organic compounds associated with characteristic fragrances found in cannabis. Terpenoids are what gives cannabis its fine smells and tastes but they are also medicinal components in their own right. The (psychoactive) effects of cannabis are derived from in the interactions of these two sets of compounds and thus quality testing involves the quantitative analysis of all these chemicals. Quality testing is not testing for contaminants.

Safety testing involves testing the cannabis for various molds, fungus, bacteria, insects, visual contaminants and pesticides. The testing of medical cannabis for pesticides is of the utmost importance. Pesticides are often neurotoxins, poisons at high doses and at low doses have been associated with chronic brain disorders, birth defects, ADHD, Alzheimer's, neurological disorders, allergic reactions, asthma, etc. Many if not most pesticides are carcinogens, or compounds which damage the livers, kidneys, reproductive systems or are neurotoxic or endocrine disruptors. Other pesticides are associated with developmental and learning disabilities.

The Environmental Protection Agency (EPA) which is charged with regulating pesticide use, states that, "By their very nature, most pesticides create some risk of harm to humans, animals, or the environment because they are designed to kill or otherwise adversely affect living organisms."

The EPA has not approved any pesticides for cannabis production, which is not surprising since producing cannabis is federally illegal, yet pesticides are commonly used on cannabis to control spider mites which thrive and flourish on indoor mono crop production. Furthermore even if the EPA approved certain pesticides for cannabis production, the data would be currently based on the ingestion of the pesticide. Cannabis use is primarily performed by inhalation of smoked or vaporized product. Theoretically breathing some "safe" pesticides could be fatal, therefore we should be conservative in pesticide use in cannabis production. We would also want to encourage the EPA or other agencies to perform safety studies on inhalation of the various approved pesticides. Currently there is no such data for the safety of any inhaled pesticide.

The lack of scientific data on cannabis contaminants has led the public to perceive contaminants in cannabis as a non-issue. Nothing could be farther from the truth.

Why do we test Green Buddha meds for contaminants such as molds, fungus, pesticides, insects, etc.?

<u>"You smoke ten random samples of cannabis and you've most likely smoked Aspergillus [mold]."</u>
<u>David Lampach, Steep Hill Lab</u>

This comes as a surprise to many cannabis users, but when cannabis is tested a surprisingly high percentage is contaminated. Our own lab NW Botanical Analysis, in addition to the nationally known Steep Hill Lab and the Werc Shop Lab have all found approximately a third of their tested samples to contain molds or fungus and about a fifth of the tested samples contain pesticides.

<u>The LA City Attorney's office in 2009 in a small study found pesticides</u> in two thirds the tested medical cannabis samples, one containing an alarming 1600 times legal limit of bifenthrin pesticide.

In an evaluative study on the quality and safety of prescription medical cannabis in the Netherlands compared with the illicit product sold in Dutch cannabis cafes, none of the prescription medicinal cannabis product contained any contaminant and all the Dutch cannabis café product contains molds and bacteria.

The Green Buddha Patient Co-op believes that we legitimate medical cannabis by performing safety testing, by insuring we deliver products free of contaminants truly deserving of the title medicine.

I have been using cannabis for years with no problem, why suddenly all the focus on contaminated medicine?

Part of the reason for the misperception is until recently we had very little data. But the lack of data is not the same as not having a problem. The reason why we have had no data is because of the political nature of cannabis research in the United States. All federally approved cannabis research in the United States must be approved by the National Institute on Drug Abuse (NIDA) and the Drug Enforcement Agency (DEA). Furthermore, all the cannabis used for research purposes is grown on the federally maintained farm in Mississippi. This federally grown cannabis is not produced with pesticides and thus there's no data for the testing of such. Additionally NIDA and the DEA have not been focused on nor concerned with cannabis contaminants and testing. While law enforcement would have access to confiscated cannabis, the rules of evidence control does not easily allow for its testing at an independent lab and the state evidence lab does not have the capacity to test for pesticides in cannabis.

All this lack of data adds up to an impression that there's no issue with contaminants in our cannabis. Nothing could be more wrong. The few studies performed consistently evidence a surprising level of contaminants in cannabis. As we begin to regulate cannabis in Washington State under I-502 safe cannabis must be our primary focus. Until we are regulated, medical cannabis collectives have a moral imperative to monitor this issue. This is why we safety test all our product at the Green Buddha Patient Co-op.

Why is contaminated cannabis allowed?

Currently medical cannabis in Washington State is not regulated. No agency is engaged in quality control. This means no one is monitoring medical cannabis collectives nor the products produced. No state agency is checking to make sure the person making your medibles washed their hands or that the person growing your meds was able to do so mold free. No organization is making sure your cannabis isn't moldy. The reason there's only self-regulation in the medical cannabis industry is the industry isn't legal. Technically in the state of Washington there's no sales in medical cannabis and thus no collectives selling cannabis, so no venue for testing medical cannabis. If you buy moldy cannabis you are on your own as a recent KOMO story concludes.

In a study performed last year in Colorado on indoor cannabis grows, 60% of the grows had ten times the mold spore levels in excess of ten times the outdoor level. The study concluded *that*

"Individuals exposed to these spore levels for excessive periods of time or with an elevated frequency may develop allergic reactions to the fungal spores resulting in upper respiratory irritation and, in some cases, hypersensitivity pneumonitis. Individuals with an immune deficiency caused by transplant surgery, corticosteroids, illness, or other causes could have severe reactions to these elevated spore levels and experience life threatening illnesses."

Because no one is monitoring, it is important you get your medicinal cannabis from a place that is committed to full safety testing.

But I see other medical cannabis collectives claim they test too, what's up?

Medical cannabis collectives ought to care about patient health – it should be our primary mission - do no harm. Indeed a lot of collectives will indeed claim they offer "100% tested" cannabis but these collectives are referring to having all their medicine checked for cannabinoid content. In other words they test for THC alone which is about advertising and nothing else. Because pesticides aren't perceived and the public is unaware collectives don't test for contaminants. Call these places and ask for what they are testing and see what kind of response you get. Fortunately all the cannabis grown under I-502 will be fully safety tested as well as potency tested and should outcompete the illicit markets.

What is the standard used at Green Buddha for medicine?

We test all our cannabis products according to the <u>Evergreen State Cannabis Trade Alliance Patient-Ready™ Cannabis standard</u>. Currently, until the new regulations for I502 produced cannabis go into effect, there is no higher standard in our state. In this manner Green Buddha hopes to advance the cause of medical cannabis and raise the industry standard.