



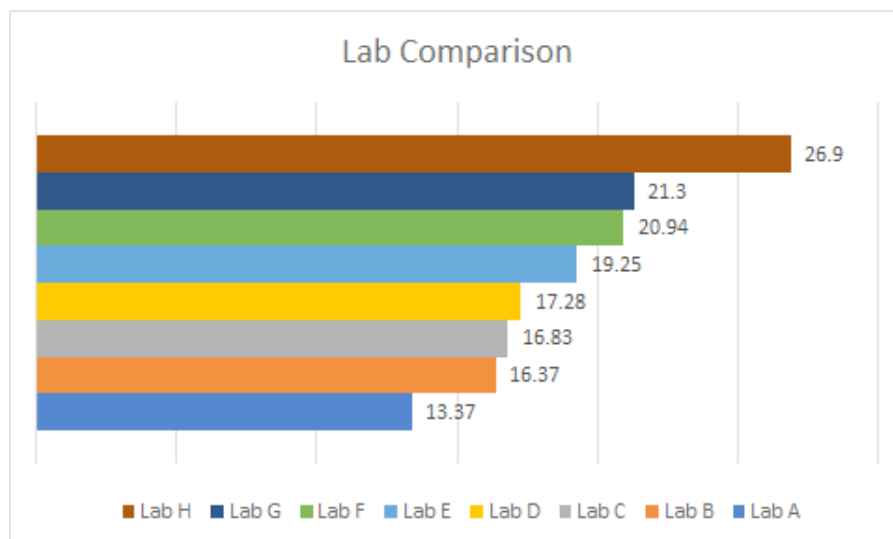
POSITION PAPER
regarding
POTENCY TESTING & LABELING
February 16, 2017

*Submitted to the Washington State Liquor and Cannabis Board by the Cannabis Farmers Council
with the unanimous approval of a duly constituted quorum of its Executive Board*

A. Experiment regarding Reliability of Potency Tests by Washington Labs

One of the Executive Board Members of the Cannabis Farmers Council (“CFC”) conducted an "experiment" in the first week of February. She took 50 grams of buds from an already tested lot of Pineapple Express flower. The flower was ground up in a food processor to create a homogeneous mixture. Then 4-gram samples were created in a manner that ensured their homogeneity and that we would reasonably expect to test the same. Sample packages were manifested and delivered on the same day to eight (8) different labs. Care was taken that all samples were uniform, and maintained at room temperature up until delivery to each lab.

These are the results:



There was a 13.53 point variation from the lowest to the highest test result of the same product. As we see, three of the results were within a point of each other, which would indicate that those labs were at least more consistent, if not more accurate, than the other five. Even if we leave out the highest level, we still see a variation of eight points in the same sample. And we can also see that the highest result

was more than double the lowest result! Given these results, one can easily conclude that little credence should be given to any particular potency test result from any particular lab.

B. Observations and Recommendations

In offering its observations and recommendations, the CFC first notes the following:

- Recommendations are made only for recreational cannabis, not for medical cannabis (because the DoH has its own rules, and medicine is generally accompanied by dosage levels).
- Recommendations are made only for flower products, and not for extracts or edibles.

1. Observations

- (a) Lab tests of potency are demonstrably unreliable, and this has been shown in many similar experiments conducted by and known to Board Members of the CFC.
- (b) The inconsistency of lab results coupled with the false confidence that such results give to the buying public is detrimental to individual purchasers as well as the healthy development of the industry as a whole.
- (c) The wide discrepancy in test results reveals the weak underbelly of the entire testing system, and is a major thorn in the side of Producers who are forced to pay significant fees for universal testing of all harvested product. This is seen as a huge payout for a dubious indication of potency.
- (d) That test results vary so widely is not too surprising since the equipment, techniques, and basic science of cannabis potency testing are relatively new and are evolving rapidly. There may be standard deviations in the testing results of any organic matter, but the gaping disparity between and among existing labs in Washington goes far beyond a reasonable margin of error. (In the experiment above, the high result was more than double the low result!)
- (e) What may be the best standard today is subject to immediate obsolescence as new developments in the testing industry occur. Any effort to standardize labs is likely to be outdated within a very short time.
- (f) Continued use of a specific potency number determined by the testing lab is unfair to Producers whose financial fate depends in large measure on accurate tests, and is misleading in the extreme to both Retailers and consumers who have no practical way to determine whether the stated lab result is anywhere near reality.
- (g) Cannabis is a complex plant about which relatively little is known due to the inability to conduct free and open research over the last eight (8) decades, beginning with the Marijuana Tax Act of 1937. Among experienced users, it is well known that factors other than THC content alone will significantly influence the potency of a particular strain. Among other things, the terpene profile of a particular plant may influence the effects felt by a user much more than just the THC level. (Low THC coupled with a rich terpene profile may be far more “powerful” than high THC coupled with a poor terpene profile.)
- (h) The same can be said in respect of the other 84 cannabinoids that may be found in a given cannabis plant. The “entourage effect” of other cannabinoids as well as terpenes can have a

profound influence on the effect experienced. To place so much emphasis on THC alone ignores this reality.

- (i) By headlining THC content on the label, especially when each underlying test result is by its nature suspect, consumers are misled into making purchasing choices based on misguided and inaccurate factors.
- (j) It might also be noted that to the extent high THC numbers are driving the market, growers will be discouraged from cultivating a wide variety of strains that have excellent qualities due to terpenes or the presence of some of the other 84 cannabinoids known to exist. Some lower THC strains might also be better suited to climate and soil conditions in various parts of the state, or be less vulnerable to pests thereby requiring less pesticide use. By inherently promoting high THC levels through the current labeling requirements, the LCB is unwittingly encouraging consumers to purchase, and farmers to grow, only strains with the highest THC yield. This is a disservice to the entire Washington cannabis industry as well as to consumers.
- (k) There are no easy fixes, but the overall scheme of cannabis testing and labeling should be reconsidered in light of the questionable value of the results. The CFC would like to engage with the LCB to determine fair and reasonable ways to address this very serious shortcoming in the industry.
- (l) Packaging & labeling issues should be part of this discussion, but it should also encompass the Quality Assurance issues that have the ongoing attention of the LCB as it drafts a Supplemental CR-102 on QA.
- (m) The universal testing model that has been imposed on Washington cannabis farmers is not followed by all states that have legalized recreational and/or medical cannabis. No other food crop is so rigorously tested, and what we are learning about the unreliable results of test results must call into question both the value of such testing for consumers and the costs that are borne by Producers.
- (n) The vast majority of cannabis farms are truly struggling just to make ends meet. Only a very few, mostly the larger farms that can achieve optimal economies of scale, are financially successful. The high cost of testing (and packaging) is a major contributing factor to the dire circumstances of so many farms. It is painful to think of the financial hardship being borne by farmers in exchange for test results in which there can be no real confidence.
- (o) In the Quality Assurance Work Group, the labs have pushed for more testing samples as important to achieve accurate test results, though coincidentally this approach will nearly double their revenue while imposing concomitant costs on farmers. It strains reason and common sense to believe that more samples and more testing will lead to more accurate results, when the problem is more likely rooted in the rudimentary nature (and perhaps lax oversight) of the cannabis testing business as a whole.
- (p) There should be no rush. It is much more important to all stakeholders, from growers to consumers and everyone in between, to get it right rather than to get it done quickly.

2. Recommendations

Some approaches that might hold promise include the following:

- (a) **Reduce Overall Volume of Potency Testing:** Following the lead of Colorado and perhaps other states, we recommend to drastically reduce the volume of potency testing required. Typically, the potency testing results of an entire harvest of a single strain cultivated in the same manner should be uniform and consistent. Spot potency testing of 10% or even 20% of a harvested strain would be sufficient to determine potency level (within the current limits of testing capabilities). Scaling back the magnitude of potency testing would not jeopardize public health or safety in any way, and would provide much needed financial relief to farmers.
- (b) **Consider Alternative Ways to Indicate Potency:** There are better and fairer ways to indicate a flower product's estimated potency than to stick a very precise number, carried out to the hundredths of a percent, on the label. Different ways of creating potency ranges or levels could be considered.
- (c) **Consider a Disclaimer:** Consider placing a *caveat* on the label to the effect that THC affects each individual in a unique way, that other cannabinoids and terpenes in a given strain can also greatly influence how a particular strain affects a person, and that potency tests are inexact by nature and tests of the very same flower may vary by more than 10% depending on a wide variety of circumstances.

None of these alone is a perfect solution, but perhaps some combination of all three might move Washington in the direction of “truth-in-advertising” by providing consumers with more fact-based information than is currently made available to them.