



Washington State
Liquor and Cannabis Board

Date: May 27, 2020

To: Jane Rushford, Board Chair
 Ollie Garrett, Board Member
 Russ Hauge, Board Member

From: Kathy Hoffman, Policy and Rules Manager

Copy: Rick Garza, Agency Director
 Megan Duffy, Deputy Director
 Justin Nordhorn, Chief of Enforcement
 Becky Smith, Licensing Director

Subject: **WAC 314-55-101 – Quality assurance sampling protocols; WAC 314-55-102 – Quality assurance testing (effective until February 28, 2021); New Section WAC 314-55-1021 – Quality Assurance and Quality Control (Effective March 1, 2021 until August 31, 2021); New Section WAC 314-55-1022 – Quality Assurance and Quality Control (Effective September 1, 2021); and WAC 314-55-1025 – Proficiency testing.**

The Policy and Rules Manager requests approval to file a rule proposal (CR 102) for the rule making described in the amended CR 102 Memorandum attached to this order and presented at the Board meeting on May 27, 2020.

If approved for filing, the tentative timeline for this rule proposal is as follows:

May 27, 2020	Board is asked to approve filing the proposed rules (CR 102 filing).
June 17, 2020	Code Reviser publishes notice.
July 8, 2020	End of formal comment period.
July 8, 2020	Public hearing held.
August 5, 2020	Board is asked to adopt rules.
August 5, 2020	Agency sends notice to those who commented both at the public hearing and in writing.
August 5, 2020	Agency files adopted rules with the Code Reviser (CR 103)
September 4, 2020	Rules are effective consistent with RCW 34.05.380(2) (WAC 314-55-101; WAC 314-55-102 (effective until February 28, 2021); WAC 314-55-1025)
March 1, 2021	WAC 314-55-1021 becomes effective (until August 31, 2021)
September 1, 2021	WAC 314-55-1022 becomes effective.

_____ Approve _____ Disapprove _____
Jane Rushford, Chair _____
Date

_____ Approve _____ Disapprove _____
Ollie Garrett, Board Member _____
Date

_____ Approve _____ Disapprove _____
Russ Hauge, Board Member _____
Date

Attachments: CR102 Memorandum - *Amended as to timeline, explanation of paused rulemaking and minor non-substantive edits.*

Significant Analysis

Small Business Economic Impact Statement



CR 102 Memorandum - *Amended as to timeline and explanation of paused rulemaking*

Regarding WAC 314-55-101 – Quality assurance sampling protocols; WAC 314-55-102 – Quality assurance testing (effective until February 28, 2021); New Section WAC 314-55-1021 – Quality Assurance and Quality Control (Effective March 1, 2021 until August 31, 2021); New Section WAC 314-55-1022 – Quality Assurance and Quality Control (Effective September 1, 2021); and WAC 314-55-1025 – Proficiency testing.

Date: May 27, 2020
Presented by: Kathy Hoffman, Policy and Rules Manager

Description of the Issue

In early 2018, several stakeholders, including medical marijuana patients, consumers, and licensees, urged WSLCB to require producers and processors to test recreational crops for pesticides and heavy metals. These partners asserted that such a move, already adopted in other states, would inspire confidence among consumers, increase access to medically compliant products, and bolster sales. In August 2018, the WSLCB began the initial stages of rule development regarding marijuana quality control and product requirements. Among the rule changes being considered was whether all marijuana products be tested for pesticides and heavy metals because neither test is required for recreational products.

As of the time of this analysis, there is currently one marijuana testing lab in Washington State capable of testing products for the full suite of I-502 tests, along with pesticides and heavy metals. There are currently a total of five labs capable of testing for the full suite of I-502 tests, plus with pesticides.

Marijuana grows operate on a wide spectrum of sophistication. Some grows are tightly controlled in technologically advanced indoor facilities; plants are grown in climate-controlled chambers where every aspect of the plant’s cultivation is monitored. Other grows are comparatively “low tech,” set outdoors and dependent on seasonable cycles. Which growth model a licensed producer chooses – either indoors or outdoors – is entirely a business decision of the licensee. Similarly, the variety of tests an accredited marijuana testing laboratory offers is entirely a business decision of the laboratory.

Marijuana cultivation, both indoor and outdoor, is associated with a variety of pests, bacteria, and fungi. Producers have used a wide variety of pesticides to reduce insect infestation. Pesticide misuse poses serious health risks to consumers, and exposure can result in a variety of well-documented symptoms,

such as difficulty breathing, abdominal pain, vomiting, dizziness, and muscle cramps. Additionally, some pesticides have been found to be carcinogenic (Taylor & Birkett, 2019).

Emerging literature and multiple studies, both nationally and globally, indicate that marijuana and marijuana products can become contaminated and must be tested to protect public health (Feldman, 2015; Subritzky, Pettigrew & Lenton, 2017; Feldman, 2015; Craven et. al., 2019; Seltenrich, 2019). Marijuana and its products can be contaminated with microbiological contaminants, such as mold or salmonella, potentially hazardous growth enhancers, and heavy metals such as chromium and lead. While marijuana in any form may be prone to contamination, extracts and concentrates may present a greater risk because any contaminants will become concentrated during processing (Seltenrich, 2019). To protect consumers against exposure to pesticides, solvents, and other contaminants, marijuana and marijuana products must be tested to ensure they are safe for human consumption.

Need for Withdrawal of Original CR102 Proposal

After the original rule proposal was filed on January 22, 2020 that set a public hearing for March 18, 2020, Governor Inslee declared a state of emergency regarding the COVID-19 pandemic. The Governor subsequently issued several proclamations that included limits on public congregation, and established social distancing guidelines. These proclamations severely limited the agency's ability to conduct public hearings as required under chapter 34.05 RCW. On March 11, 2020, the Board continued the March 18 public hearing on this proposal that to April 1, 2020.

On March 23, 2020, Governor Inslee issued the first Stay Home, Stay Health proclamation. Because there were no viable options for the Board to hold a public hearing that complied with the Stay Home, Stay Health proclamation and subsequent updates, the Board was unable to hold a public hearing on the proposed rules on April 1, 2020. On March 27, 2020, and consistent with RCW 34.05.335 and WAC 1-21-060, the Board withdrew its proposed rulemaking filed on March 11, 2020 as WSR 20-07-052 as a continuance of proposed rulemaking filed on January 22, 2020 as WSR 20-03-076.

The Board's intention in taking this action was to refile a new CR 102 regarding proposed marijuana quality control rules as soon as reasonably possible, and once virtual stakeholder engagement options became available. It was clearly articulated at the March 27 meeting that the Board was *not* redrafting rules for this project. The only change to the re-filed CR 102 rule package would be the hearing date, potentially the forum for the public hearing, and timelines regarding phase in. The purpose of the withdrawal was to merely place the project on pause until venue and method for holding a public hearing were solidified and

available. The substance of the rule proposal would not change, and has not changed.

Rule Necessity

Rules are needed for the following reasons:

Current testing requirements for recreational marijuana are intended to ensure that products for sale are safe and have accurate potency levels. However, Washington state recreational marijuana products are not required to be tested for pesticides and heavy metals, and although not precluded from doing so, many producers and processors do not test for either. Based on a number of elements, including consumer concern and national best practices, it has become evident that standardized testing for *all* marijuana products produced, processed, and sold in Washington State is necessary. *Washington State is the only state with both recreational and medical programs that does not require such testing for all products.*

There is no guidance available to the WSLCB or any other state agency regulating marijuana from federal agencies who set standards for agriculture, food, and other products because marijuana remains classified as a Schedule I drug, and federally illegal. This presents regulatory challenges to the WSLCB, regulators throughout the country, and the industry since there is limited funding to support research on how marijuana tainted with potential toxins affects humans. However, while the possible health impact of consuming marijuana products with unapproved pesticides is an emerging area of research, the overarching goal of the WSLCB is to protect public health and safety, and to assure that all products sold within the I-502 market are safe for all consumers.

Recently, concern around the composition and safety of marijuana concentrates for inhalation has highlighted the need to assure that all marijuana products are tested for the presence of harmful compounds and other contaminants. The proposed rule amendments and phase-in plan offer a reasonable time frame that provides both licensees and accredited labs the opportunity to adjust business models where necessary, and offers options to prepare for additional fields of testing either immediately or over an extended, but finite period of time.

These new rule sections and amendments, in addition to proposed technical and clarifying revisions support the overarching agency goal of ensuring the highest level of public safety by continually improving and enforcing regulations that reflect the current, dynamic regulatory environment.

Description of Rule Changes

Amended Section. WAC 314-55-101 – Reaffirms existing protocols designed to reduce, where possible, product contamination during and after sample reduction. Retains five-pound lot size for sample collection. Updates, reorganizes and streamlines rule language where appropriate to assure scientific accuracy.

Amended Section. WAC 314-55-102 (Effective through March 3, 2021) – Reaffirms existing protocols, and updates reorganizes, and streamlines rule language where appropriate to assure scientific accuracy. Adds allowance for terpene testing.

New Section. WAC 314-55-1021 (Effective March 4, 2021 until September 3, 2021) – Will replace WAC 314-55-102 by adding pesticide testing requirement to the list of quality control tests for all marijuana products.

New Section. WAC 314-55-1022 (Effective September 4, 2021) - Will replace WAC 314-55-1021 by adding heavy metals testing requirement to the list of quality control tests for all marijuana products.

Amended Section. WAC 314-55-1025- Updates language to include “board” where appropriate consistent with statutory reference.

References

- Craven, C. B., Wawryk, N., Jiang, P., Liu, Z. & Li, X.-F. (2019). Pesticides and trace elements in cannabis: Analytical and environmental challenges and opportunities. *Journal of Environmental Sciences*, 85, 82–93. doi: 10.1016/j.jes.2019.04.028.
- Feldman, J. (2014). Pesticide Uses in Marijuana Production. *Beyond Pesticides*, 34(4).
- Seltenrich, N. (2019). Cannabis Contaminants: Regulating Solvents, Microbes, and Metals in Legal Weed. *Environmental Health Perspectives*, 127(8), 082001. doi: 10.1289/ehp5785.
- Seltenrich, N. (2019). Into the Weeds: Regulating Pesticides in Cannabis. *Environmental Health Perspectives*, 127(4), 042001. doi: 10.1289/ehp5265.
- Subritzky, T., Pettigrew, S. & Lenton, S. (2017). Into the void: Regulating pesticide use in Colorado's commercial cannabis markets. *International Journal of Drug Policy*, 42, 86–96. doi: 10.1016/j.drugpo.2017.01.014.
- Taylor, A. & Birkett, J. W. (2019). Pesticides in cannabis: A review of analytical and toxicological considerations. *Drug Testing and Analysis*. doi: 10.1002/dta.2747.

Small Business Economic Impact Statement

Chapter 314-55
Rules Concerning Marijuana Quality Assurance
Testing and Product Requirements

January 22, 2020

SECTION 1:

Describe the proposed rule, including a brief history of the issue; an explanation of why the proposed rule is needed; and a brief description of the probable compliance requirements and the kinds of professional services that a small business is likely to need in order to comply with the proposed rule.

In early 2018, several stakeholders, including medical marijuana patients, consumers, and licensees, urged WSLCB to require producers and processors to test recreational crops for pesticides and heavy metals. These partners asserted that such a move, already adopted in other states, would inspire confidence among consumers, increase access to medically compliant products, and bolster sales.

In August 2018, the WSLCB began the initial stages of rule development regarding marijuana quality control and product requirements. Among the rule changes being considered was whether all marijuana products be tested for pesticides and heavy metals.

The proposed rules are necessary to align current marijuana testing standards with the testing requirements described in existing Washington State Department of Health (DOH) Marijuana Product Compliance regulations, located in chapter 246-70 WAC. These proposed rule revisions are anticipated to increase testing efficiencies, safety and quality for all marijuana products produced and sold in Washington State.

WSLCB filed a CR101 on August 18, 2018 to consider rule changes to chapter 314-55 WAC regarding quality assurance testing and product requirements. The CR101 described the following topic areas to be considered for rule development and revision:

- Lot and batch sizes;
- Fields of testing and pass/fail level adjustments;
- Potency testing requirements;
- Pesticide testing requirements for all marijuana products;
- Heavy metals testing requirements;
- Sample deduction requirements;
- General testing rule adjustments;
- Product, THC (tetrahydrocannabinol) serving limits, and packaging requirements; and
- Other related rule changes that may be necessary or advisable.

While the proposed rules consist of non-substantive changes to WAC 314-55-101 and substantive changes to WAC 314-55-102, the requirements determined most likely to result in costs to businesses are the inclusion of testing requirements for pesticides and heavy metals. Therefore, these proposed testing requirements are the focus of this analysis of potential impacts on small businesses as they are defined in RCW 19.35.030.

RCW 19.85.030 requires that the relevant agency prepare a small business economic impact statement (SBEIS) if the proposed rule “will impose more than minor costs on businesses in an industry.”¹ “Minor cost” cost is defined in RCW 19.85.020 as a cost per business that is less than 0.3 percent of annual revenue or income, or \$100, whichever is greater, or one percent of annual payroll.² These calculations are statutorily defined, and the agency is required to comply with these specific requirements, despite stakeholder suggestion to the contrary.

The guidelines for preparing an SBEIS are included in RCW 19.85.040.³ The WSLCB also utilized the more specific guidance and resources provided by Washington State’s Office for Regulatory Innovation and Assistance (ORIA).⁴ Consistent with SBEIS Frequently Asked Questions guidance, agencies are required to consider costs imposed on businesses and costs associated with compliance with the proposed rules.⁵ Agencies are not required under chapter 19.85 RCW to consider indirect costs not associated with compliance with the rule.

This document describes the WSLCB analysis of potential, estimated economic impacts of revisions to WAC 314-55-101 and WAC 314-55-102 on small businesses in Washington State as small business is defined in RCW 19.35.030. The sequence of this analysis below follows templates provided by ORIA, and generally, chapter 19.85 RCW.

SECTION 2:

Identify which businesses are required to comply with the proposed rule using the North American Industry Classification System (NAICS) codes and what the minor cost thresholds are.

The proposed rules primarily affect two types of licensed businesses involved in the marijuana industry in Washington State: licensed producer/processors, who bear the direct costs of additional testing requirements; and accredited marijuana testing laboratories, who conduct testing of marijuana products.⁶ Table 1 presents the number of entities in Washington State for each of these types of businesses.

¹ RCW 19.85.030 Agency Rules – Small Business economic impact statement reduction of costs imposed by rule. Accessed January 8, 2020 at: <https://app.leg.wa.gov/RCW/default.aspx?cite=19.85.030>.

² RCW 19.85.020 Definitions. Accessed January 8, 2020 at: <https://app.leg.wa.gov/rcw/default.aspx?cite=19.85.020>.

³ RCW 19.85.040 Small business economic impact statement—Purpose—Contents. Accessed January 8, 2020 at: <https://app.leg.wa.gov/RCW/default.aspx?cite=19.85.040>.

⁴ ORIA. 2019. Regulatory Fairness Act Support. Accessed January 8, 2020 at: https://www.oria.wa.gov/site/alias_oria/934/regulatory-fairness-act-support.aspx.

⁵ WA Attorney General Office. 2019. Small Business Economic Impact Statements – Frequently Asked Questions. Accessed January 8, 2020 at: https://www.oria.wa.gov/Portals/_oria/VersionedDocuments/RFA/Regulatory_Fairness_Act/DRAFT_SBEIS_FAQ.pdf.

⁶ While retailers may be affected by some minor changes to packaging labeling requirements under the proposed rules, these costs are considered likely to be minimal (Personal communication with WSLCB staff, March 14, 2019); thus, impacts to retailers are not considered in this analysis.

Note that for licensing purposes, different tiers of producers are defined in WAC 314-55-075;⁷ however, for purposes of the small business economic impact statement, under the RCW 19.85.030, small business is defined as “any business entity, including a sole proprietorship, corporation, partnership, or other legal entity, that is owned and operated independently from all other businesses, and that has 50 or fewer employees.”⁸

The number of producer/processors in Table 1 is based on the number of marijuana processors/producers that reported revenue, lab tests and employment between May 2018 and April 2019. Data from the Employment Security Division (ESD) of Washington State indicates only six licensed producer/processor entities have 50 or more employees.⁹ Monthly sales information reported during that timeframe indicates that over half (approximately 55 percent) of licensed producer/processors currently holding licensees may not be in operation; however, some of these businesses may be outdoor growers who do not have consistent monthly income.¹⁰

While there is some uncertainty in the number of currently active producer/processors, if the number of producer/processors reported in Table 1 is understated, this would imply that the minor cost threshold reported in Table 1 is overstated. We note that this leads to conservative conclusions, because a lower threshold would result in a greater likelihood that per entity compliance costs would exceed the minor cost threshold, thus triggering preparation of a small business economic impact statement.

Table 1

Type of Business	# of Businesses In Washington	Percentage of Businesses Considered “Small” ³	Average Annual Revenues ^{4,5}	Minor Cost Threshold (0.3% Average Annual Revenues)
Marijuana Producer, Processor	341 ¹	98%	\$1,418,224	\$4,255
Cannabis Testing Laboratory	14 ²	100%	\$1,997,000	\$5,990
Notes:				
¹ Represents the number of Marijuana producer/processors that reported revenue, lab tests, and employment between 2018-05 and 2019-04				
² Represents the number of labs certified to conduct testing on cannabis products in Washington State.				

⁷ See https://lcb.wa.gov/mjlicense/producer_license_discriptions_fees. Tier 1 allows for 2,000 square feet or less of dedicated plant canopy; Tier 2 allows for between 2,000 and 10,000 square feet or less of dedicated plant canopy; and, Tier 3 allows for between 10,000 and 30,000 square feet or less of dedicated plant canopy.

⁸ RCW 19.85.020 Definitions. Accessed May 6, 2019 at: <https://app.leg.wa.gov/rcw/default.aspx?cite=19.85.020>.

⁹ Email communication from ESD to WSLCB, March 22, 2019.

¹⁰ Information from online data sources (e.g., TopShelfData.com and 502data.com for sales in December 2018 and February 2019, respectively) and interviews with producer/processors conducted in April 2019.

³ Defined as having 50 or fewer employees. Producer/processor employment information provided by the Employment Security Department for the 3rd quarter of 2018. Laboratory businesses employment determined through interviews with labs and LinkedIn business profiles accessed 2019-04 and 2020-01

⁴ Average annual revenues for producer/processors based on total sales divided by the number of business that reported sales, lab tests, and employment.

⁵ For testing laboratories, minor cost threshold based on average annual revenues from the 2010 Economic census of the U.S. for businesses in the “Testing Laboratories” category (NAICS 541380)(WA State Auditor’s Office 2019)

“Minor cost” is defined in RCW 19.85.020 as a cost per business that is less than three-tenths of one percent of annual revenue or income, or one hundred dollars, whichever is greater, or one percent of annual payroll. As revenue information is more readily available than payroll, the analysis calculates minor cost thresholds based on revenues of business entities in the affected industries. The minor cost threshold is \$4,255 for all producer/processors, based on the total producer/processor revenue reported by licensed producers and/or processors. Since these are the most recent and publicly available data points, these were used for this calculation.

For labs, neither payroll nor revenue information was available for the 15 certified marijuana testing labs; thus, we base the minor cost threshold on the best readily available source of revenue data for businesses in this industry, the 2012 Economic Census of the U.S. for the “Testing Laboratories” category (NAICS 541380).¹¹ Based on these data, testing laboratories have average annual revenues of \$1,997,000. Note, these data may overstate average revenues for certified marijuana testing labs in Washington State, as laboratories involved in testing other products tend to be larger businesses.¹²

The minor cost threshold is \$4,255 for producer/processors and \$5,990 for testing laboratories. Because each of these values falls well above \$100, the statutory minimum threshold for “minor cost,” we utilize these values in the analysis that follows.

SECTION 3:

Analyze the *probable* cost of compliance. Identify the *probable* costs to comply with the proposed rule, including: cost of equipment, supplies, labor, professional services and increased administrative costs; and whether compliance with the proposed rule will cause businesses to lose sale or revenue.

Complying with the proposed rule changes requires that marijuana products be tested for pesticides and heavy metals, in addition to existing testing protocols. This analysis relies on information gathered through outreach to businesses to estimate the potential costs of the

¹¹ In the absence of available revenue data for the certified marijuana testing labs, we utilized the WA State Auditor’s Office Minor Cost Tool calculator available on the ORIA website (WA State Auditor’s Office 2019). This tool provides average annual revenues by NAICS code. As specified in the RFA, an industry is defined as “all of the businesses in Washington State in any one four-digit standard industrial classification as published by the United States department of commerce, or the North American industry classification system as published by the executive office of the president and the office of management and budget” (RCW 19.85.020).

¹² Personal communications with labs (April 2019, January 2020) and WSLCB staff (March 2019, and December 2019).

proposed rule, and data reported by licensees. It is anticipated that rather than increased administrative costs, compliance costs are associated with the initial increase in testing costs.

For producer/processors, each marijuana flower lot or batch of intermediate product (e.g., concentrate, extract, or oil) will require additional testing in the form of screening for pesticides and heavy metals. During initial interviews, producer/processors indicated that they would be unable to pass these additional testing costs on to retailers in the form of higher prices.¹³ This was further expressed during the two Listen and Learn sessions occurring in April and August of 2019, as well as through written comment.

For purposes of this analysis, however, it is assumed that these costs will not be passed on to retailers or consumers at this time. This is a conservative assumption, in that it will lead to greater estimated impacts on businesses. If producer/processors *are* able to pass on the costs of testing, then the impacts would more likely be borne by consumers.

Labs currently charge approximately \$120 to \$125 per sample for pesticides testing; per sample costs for testing for heavy metals is listed on one website at \$70 and another at \$120.¹⁴ Based on interviews with a subset of producer/processors and prices available from labs, we estimate the potential range of testing costs per sample to add pesticides and heavy metals screening; these costs are expected to range from \$165 to \$400.¹⁵

In order to estimate annual compliance costs for producer/processors, information on the number of samples tested annually is needed. It is difficult to generalize the average number of samples tested, as business models vary greatly. For example, the number of samples tested on an annual basis may vary based on factors such as the size of an operation or harvest, the type of production (such as outdoor grows that harvest once or twice per year), and testing choices in terms of batch/lot size (e.g. small producers may choose to test only once they have a five pound lot). Based on information gathered through initial interviews, follow up discussions during Listen and Learn sessions, and staff research, we estimate annual low-end and high-end costs of additional testing per producer/processor.¹⁶ These estimates are presented in Table 2 below:

¹³ Based on interviews with a subset of producer/processors. Significant additional research would be required to confirm or refute this assumption. For example, research might include the identification or development of elasticity estimates for this evolving market, as well as information about current profit margins in this industry. This information, if available, could be used to determine which actors (producers or consumers) are most likely to bear the costs of the rule changes.

¹⁴ Personal communication with labs (April 2019) and WSLCB staff (March 2019 and January 2020); also, online research from testing labs websites.

¹⁵ Costs vary depending on whether they are for individual tests or incremental costs for a suite of tests; this range includes producer/processors expected testing costs as well as prices posted by laboratories. We note that for the two labs for which testing costs were available, prices ranged from \$165 - \$240.

¹⁶ We note that while our interviews provided an understanding of the likely range of samples tested annually by Tier 1 and Tier 2 producer/processors in a variety of settings, including indoor and sun grown, due to the limited number of interviews and lack of response from Tier 3 producers/processors, we lack similar information for larger producer/processor operations.

Table 2:

Scenario	Number of Samples Tested Annually	\$165 Per Sample ³	\$225 Per Sample ¹	\$400 Per Sample ¹
Low # of Samples	72 ¹	\$11,880	\$16,200	\$28,800
High # of Samples	2,080 ¹	\$343,200	\$468,000	\$832,000
Average # of Samples	184 ²	\$30,360	\$41,400	\$73,600
Median # of Samples	101 ²	\$16,665	\$22,725	\$40,400
Notes:				
¹ Estimates based off of information collected in interviews by Industrial Economics Incorporated, Spring 2019				
² Figures based on traceability data, 1/2020				
³ Cost based on currently available pricing in Washington state, 1/2020				

Source: Estimates of number of tests, and costs for pesticide and heavy metals testing based on information collected in interviews with labs and producer/processors and online research into testing prices.

The cost estimates in Table 2 are subject to a variety of caveats, including the following:

- Some producer/processors are already testing for pesticides for various reasons (e.g., already producing medically compliant products, consumer/retailer demand, and interest in pesticide-tested products). To the extent producers are already incurring pesticide testing costs, the overall incremental compliance costs of the proposed rule would be lower.
- Prices that will be charged for pesticide and heavy metals testing once these tests are required are uncertain. As more labs begin offering testing, pricing could change. Currently labs indicate that there is a race to the bottom for pricing for marijuana testing, and labs have recently cut their prices for testing for the suite of quality assurance tests currently required under WAC 314-55-102.
- This estimate does not attempt to determine the impact of increasing the lot size from which a minimum of four samples must be drawn. Although this was discussed during Listen and Learn sessions, and attendees were split in their approval or disapproval of lot size increase, no verifiable evidence, data or calculation was offered to support increasing lot size.

The proposed rules do not require labs to test pesticides or heavy metals. However, to remain viable under the proposal, labs may need to obtain the equipment needed for these additional tests, and seek certification for them. If they chose not to obtain pesticides and heavy metals certifications, they may experience a loss in business³ as customers opt for testing with other labs offering the full suite of required tests. Currently, four labs are certified to test for pesticides, and one is currently certified to test for the required pesticides and heavy metals. Through discussions with industry representatives, it appears many of the existing labs are considering purchasing the necessary equipment and becoming certified to perform the additional tests.

This decision suggests that those labs believe offering these tests is a good business decision, and they will be able to recoup the costs of certification through the fees they will charge for conducting testing over time.¹⁷

Given the nascent status and current competitive nature of the marijuana industry, it is unclear how the market will react to new testing requirements. For example, in the short run some labs appear to be charging prices that do not likely cover incremental operating costs. This business strategy is likely not sustainable.

WSCLB is not required under RCW 19.85 to consider indirect costs potentially resulting from the proposed regulation. Costs of certification, and/or any loss in sales to testing labs as a result of the proposed rule are considered an indirect impact of the rulemaking, not a direct compliance cost. However, given that all of the marijuana testing labs are small businesses, we present these costs in context for purposes of this analysis.

Additionally, the proposed rules do not change or alter the laboratory accreditation process, revise any testing method or methodology development or validation processes, or require the acquisition, upgrade or purchase of any equipment. Currently, the WSLCB's authority to regulate marijuana testing labs is limited solely to accreditation which will eventually be a function of the Department of Ecology; however, **WSLCB remains statutorily required to set standards for product testing, even after accreditation is transferred.** Further, testing labs in Washington State independently select and utilize various business and operating models. While the proposed rules increase required testing for marijuana *products*, they *do not* require testing labs to offer the full suite of proposed tests. As noted previously, whether or not the proposed full suite of tests is offered by a testing lab is a business decision to be made by each testing lab.

Costs associated with testing laboratories efforts to become certified to perform pesticides and heavy metals testing include a range of one-time and ongoing additional costs for the labs. The majority of the costs associated with a lab becoming certified to perform pesticides and heavy metals testing are related to the investment in equipment. Laboratories report that estimated costs for equipment needed to perform pesticides and heavy metals tests range from \$500,000 to \$1.3 million per business entity. In addition, there are a variety of other potential costs related to becoming certified for pesticides and heavy metals testing, including but not limited to:

- Rent or costs to purchase additional space to house equipment and store supplies;
- Improvements to space (e.g., duct work, electrical work);
- Operational costs including increased electricity costs, waste containers, consumables (e.g., solvents, standards);
- Payroll and benefits for additional scientists;
- Preventative maintenance contracts for equipment;
- Auditing costs (for certification); and,

- Miscellaneous (vibration proof benches).

SECTION 4:

Analyze whether the proposed rule may impose more than minor costs on businesses in the industry.

Given the minor cost thresholds calculated in Section 2, and the compliance costs presented in Section 3, this rule is likely to impose more than minor costs on licensees. Based on the high-end costs of pesticide and heavy metals testing, if producer/processors perform more than five tests a year they will experience greater than minor costs; based on low-end testing cost estimates, producer/processors who perform more than 10 tests per year would exceed the minor cost threshold. The cost of equipment that labs would need to purchase to conduct testing would also exceed the minor cost threshold.

SECTION 5:

Determine whether the proposed rule may have a disproportionate impact on small businesses as compared to the 10 percent of businesses that are the largest businesses required to comply with the proposed rule.

When proposed rule changes cause more than minor costs to small businesses, the RCW 19.85.040 requires an analysis that compares the cost of compliance for small business with the cost of compliance for the ten percent of businesses that are the largest businesses required to comply with the proposed rules to determine whether the costs are considered disproportionate.¹⁸ Data limitations prevent the identification of per entity compliance costs needed for this comparison. Specifically, we lack the detailed information needed to estimate average annual per entity costs, or a reasonable range of costs.

In particular, in order to calculate annual costs, we require information on a per entity basis describing the number of samples being tested per year. While we have some limited anecdotal information on the numbers of samples tested per year by individual producer/processors, we lack information on the myriad business models that could lead to a wide range in the number of samples tested per year, and thus a wide range of per entity compliance costs per year. Developing reliable estimates would require a comprehensive survey with a *reasonable* response rate, and even then, given the wide variability of business models and documented inconsistency in responses from licensees, per entity costs is difficult to determine.

It is important to note that nearly all of the businesses affected by the rule changes are considered small under chapter 19.85 RCW (i.e., businesses with fewer than 50 employees). In addition, small businesses may experience the effects of the rule differently than large businesses in terms of cost.

¹⁸ The RFA provides several options for comparing costs, including: (a) Cost per employee; (b) Cost per hour of labor; (c) Cost per one hundred dollars of sales (RCW 19.85.040(1)). In the absence of sufficient data to calculate disproportionate impacts, an agency whose rule imposes more than minor costs must mitigate the costs to small businesses, where legal and feasible, as defined in this chapter (RCW 19.85.030(4)).

SECTION 6:

If the proposed rule has a disproportionate impact on small businesses, identify the steps taken to reduce the costs of the rule on small businesses. If the costs cannot be reduced, provide a clear explanation of why.

The proposed rule changes include provisions that are intended to reduce the compliance costs for small businesses. These include:

- An incremental phase-in period that contemplates full compliance by March, 2021; and
- Allowing labs to subcontract pesticide and heavy metals testing for a period of time.

It is difficult to accurately assess if small businesses will be disproportionately impacted by this rule proposal when there is both significant overlap and variance between the groups evaluated. As noted above, and throughout this SBEIS, most of the businesses impacted are small as defined by RCW 19.85.030.

In addition, WSLCB considered a range of suggestions from industry representatives, licensees, and others, including:

- Testing by lot system that is currently in place for other types of testing does not make sense. They suggested a range of other options including:
 - Regular third-party testing periodically (e.g. quarterly or once a month). Could have the producer/processors pay for this system.
 - For pesticides and heavy metals, allow processors to conduct one test of the concentrate for each harvest from each producer. This could reduce impacts because these testing costs get passed on to the producer and if the testing costs are increased significantly it may cause small businesses to choose not to make concentrates, and processors will lose business.
- Consider exemption for indoor growers for heavy metals testing; heavy metals should not be an issue for indoor growers because they are only using nutrients that have been approved and previously screened.
- Consider an exemption for new product development. Testing costs could make it cost prohibitive to grow small lots of new strains.
- Consider changes to the pesticide standards being proposed. Ensure that the limits are reasonable and science-based; need to consider different limits for different types of uses (e.g. ingestion vs. inhalation). Interviewees and commenters mentioned concerns about the pesticide standards being proposed being too stringent and the costs of failure for small businesses who then may lose the value of an entire lot.
- Consider an education campaign to inform retailers and consumers of the benefits of pesticides and heavy metals testing; could help increase prices to allow for producer/processors to pass on some of the increased cost of testing.
- Consider testing soil for heavy metals as opposed to plants;

- Create carve-outs, exemptions, and specialized criteria for sun growers who engage in “sustainable farming practices.”
- Recalculate costs based on methods other than those required by chapter 19.85 RCW.
- Revise rules outside of the rule development process and chapter 34.05 RCW; consider “intangibles,” such as when “...a farmer can no-longer earn a living off their land and when a small business owner who is passionate about what they do can longer do the thing they love for work. The world is a better place when more people get to follow their dreams & passion.”
- Keep lot size the same. Doing so will impact Tier 1 producers less.
- Consider only end product testing.
- Consider graduated lot sizes.
- Consider using WSDA lab for random pesticide and heavy metal testing.

SECTION 7:

Describe how small businesses were involved in the development of the proposed rule.

Throughout the rule development process, the WSLCB has engaged with businesses likely to be affected by the rule, and who volunteered to participate in the process. To support development of the SBEIS, a subset of six producer/processors spanning a range of both tiers and types of producers was contacted; interviews were conducted with two producers, one processor, and one producer/processor. In addition, interviews were conducted with three testing laboratories. Additional opportunity for public comment will be available when the proposed rule is published. Indoor and outdoor farmers, including sun growers, were included in the interviews.

During the rule development process, the WSLCB hosted two “Listen and Learn” sessions, one in April 2019 and the second in August 2019, inviting industry discussion and feedback on the proposed rules, and discuss potential mitigation strategies. The WSLCB’s stakeholder process encouraged interested parties and industry partners to:

- Identify burdensome areas of existing and proposed rules;
- Proposed initial or draft rule changes; and
- Refine those changes.

Although the WSLCB broadly messaged these sessions (messaging went directly to *all* licensees, as well as over 10,000 GovDelivery subscribers), few processors and producers attended the sessions. This rule project was the first employing the “Listen and Learn” model, and attendees were initially unfamiliar with not only the model, but the process, although detailed agendas were provided well in advance of each meeting.

These heavily facilitated sessions followed two thought streams: the first asked attendees to review draft conceptual rules offered well in advance of the meeting and provide feedback or specific rule language, specifically indicating what they liked, didn't like, and what they proposed in the way of a solution. No rule language revisions were offered by attendees at either session. Solutions ranged from suggesting that figures and language be more concise in general without offering example, to unsupported assertions that adding pesticides and heavy metals to the suite of required tests would put certain producers out of business.

All comments received during these sessions were curated to the extent possible, although developing themes from sessions was difficult based on the broad range of comments. The proposed rules went through several stages of edits, review, discussion, and then further refinement before arriving at the initial proposal. The end result of this process are proposed rules that are offered as a framework and guidance for testing marijuana products that supports the overarching WSLCB goal of public health and safety.

A summary of the description of issues related to the proposed rule set and how the agency collaborated with stakeholders and industry partners to mitigate potential burden associated with rule compliance is more fully described in the Significant Analysis prepared consistent with RCW 34.05.328, including a phase-in plan, and offered as part of this initial rule proposal.

SECTION 8:

Identify the estimated number of jobs that will be created or lost as a result of compliance with the proposed rule.

While the impacts to individual producer processors may depend on their ability to pass on increased testing costs (in the form of higher prices to retailers), the proposed rule is not expected to affect the amount of marijuana produced. Thus, the proposed rule is unlikely to affect the overall number of employees of producer/processors or retailers. For example, if increased testing costs lead some smaller entities to cease production, other entities may produce larger volumes.

While it would be an indirect effect, the proposed rule may result in some limited additional employment in the labs conducting testing. In order to conduct the testing, a lab adding this testing capability may need to hire one or two additional scientists or technicians to operate equipment and conduct tests. The extent of potential employment gains are uncertain, but given the small number of labs in the industry (currently 15 certified labs) any employment gains would likely be limited.

Significant Legislative Rule Analysis

Chapter 314-55 Rules Concerning Marijuana Quality Assurance Testing and Product Requirements

January 22, 2020

Amended as to timeline, explanation of paused rulemaking, and minor non-substantive edits, May 27, 2020

SECTION 1:

Describe the proposed rule, including a brief history of the issue, and explain why the proposed rule is needed.

These initial proposed rule amendments revise and update current marijuana quality assurance sampling protocols described in WAC 314-55-101, and marijuana proficiency testing described in WAC 314-55-1025.

This proposal also provides that as of September 2021, in addition to the currently required suite of tests, all marijuana products produced, processed, and sold in Washington State be tested for pesticides and heavy metals. This is accomplished by revising and updating existing WAC 314-55-102 by way of a phase-in plan, as follows:

- The first proposed revisions, if adopted, would be effective until February 28, 2021.
- On March 1, 2021, WAC 314-55-102 would be repealed, and WAC 314-55-1021 would become effective until August 31, 2021, adding pesticide testing to the current suite of required product testing for all marijuana products produced and sold in Washington State.
- Finally, on August 31, 2021, WAC 314-55-1021 would be repealed, and effective September 1, 2021, WAC 314-55-1022 would become effective, requiring both pesticides *and* heavy metals to the current suite of required product testing for all marijuana products produced and sold in Washington State.

As a technical matter, this proposal renames and more appropriately refers to marijuana *quality control* sampling protocols and marijuana *quality control* and assurance testing standards. While quality control is a set of activities designed to evaluate a product, quality assurance pertains to activities that are designed to ensure that a *process* is adequate and the system meets its objectives. In contrast, quality control focuses on finding defects or anomalies in a product or deliverable, and checks whether defined requirements are the right requirements. Testing is one example of a quality control activity, but there are many more such activities that make up quality control. For these reasons, this proposal renames these sections.

Other proposed revisions include streamlined, clarified language; section reorganization to increase readability, along with reduction and removal of passive language where appropriate.

Background

In 2012, Washington State voters approved Initiative 502 (I-502) that created a “tightly regulated” system for the production, processing, and distribution of marijuana for recreational use by adults 21 years of age and older. The WSLCB was tasked with creating the licensing and enforcement frameworks for such a system, assuring that

each of these structures supported an overarching agency goal of ensuring the highest level of public safety.

RCW 69.50.348(1) provides that on a schedule determined by the WSLCB, every licensed marijuana producer and processor must submit representative samples of marijuana, usable marijuana, or marijuana infused products produced or processed by the licensee to an independent, third-party testing laboratory meeting the accreditation requirements established by the WSLCB for inspection and testing to certify compliance with standards adopted by the WSLCB. The provisions regarding accreditation will change on July 1, 2024, when third-party testing laboratories must meet accreditation standards established by the Washington State Department of Ecology. However, all other elements regarding regulation of the product, including product testing standards, will remain the same, and provide that:

- Licensees must submit the results of inspection and testing for quality assurance and product standards required under this section to the WSLCB on a form developed by the state liquor and cannabis board.
- If a representative sample inspected and tested under this section does not meet the applicable quality assurance and product standards established by the WSLCB, the entire lot from which the sample was taken must be destroyed.
- Any sample remaining after testing shall be destroyed by the laboratory or returned to the licensee submitting the sample.
- The WSLCB may adopt rules necessary to implement this section.

During the 2015 legislative session, the Cannabis Patient Protection Act (Senate Bill 5052) was introduced and adopted, creating a regulatory structure for the medical use of marijuana. Although this use had been permitted since 1998, the marijuana produced by individuals and under collective garden systems was not subject to the same testing and production standards as the newly established recreational market. Intended as a "...comprehensive act that uses the regulations in place for the recreational market to provide regulation for the medical use of marijuana," the bill placed the authority to establish standards around product testing for "medically compliant" product with the Department of Health (DOH).

Specifically, the bill noted that the legislature, "...intends that medical specific regulations be adopted as needed and under consultation of the departments of health and agriculture so that safe handling practices will be adopted and so that testing standards for medical products meet or exceed those standards in use in the recreational market." The enacted amendments authorized WSLCB to determine approved pesticides and pesticide testing requirements, and required DOH to adopt rules related to products sold by licensed retailers holding a medical marijuana endorsement, including but not limited to pesticide testing requirements.

In 2016, the LCB formed a work group to reexamine marijuana quality assurance testing rules described in WAC 314-55-102, including but not limited to testing limits for residual solvents and microbial testing. Four meetings were held in 2016: April 28th, May 11th,

June 7th, and July 1st. The work group consisted of 29 members (11 industry, 18 state agency and vendors, and 18 reviewers.)

Subsequently, the WSLCB adopted rules in 2016 related to sampling protocols under WAC 314-55-101, and amended portions of WAC 314-55-102 related quality assurance testing. Substantial amendments to both regulations occurred in 2017, and more specifically, to WAC 314-55-102, adding a new section (2) clearly describing minimum required testing for each product type. Because DOH had adopted rules related to medically compliant products under WAC 246-70-050, requiring both heavy metal and pesticide screening for medically compliant products, the *WSLCB* made these tests optional for recreational use marijuana products at that time, *based largely on industry concern that the costs of adding pesticide and heavy metals testing would reduce business viability*. Licensees producing and processing recreational marijuana products are not precluded or prevented from requesting pesticide and heavy metals testing for recreational product in addition to the basic suite of required I-502 tests.

Current Landscape

In early 2018, several stakeholders, including medical marijuana patients, consumers, and licensees, urged WSLCB to require producers and processors to test recreational crops for pesticides and heavy metals. These partners asserted that such a move, already adopted in other states, would inspire confidence among consumers, increase access to medically compliant products, and bolster sales. In August 2018, the WSLCB began the initial stages of rule development regarding marijuana quality control and product requirements. Among the rule changes being considered was whether all marijuana products be tested for pesticides and heavy metals.

As of the time of this analysis, there is currently one marijuana testing lab in Washington State capable of testing products for the full suite of I-502 tests, along with pesticides and heavy metals. There are currently a total of five labs capable of testing for the full suite of I-502 tests, along with pesticides.

Licensees are responsible for selecting and implementing their own business models, and as a result, marijuana grows operate on a wide spectrum of sophistication. Some grows are tightly controlled in technologically advanced indoor facilities; plants are grown in climate-controlled chambers where every aspect of the plant's cultivation is monitored. Other grows are comparatively "low tech," set outdoors and dependent on seasonable cycles. Which growth model a licensed producer chooses – either indoors or outdoors – is entirely a business decision of the licensee. Similarly, the variety of tests an accredited marijuana testing laboratory offers is entirely a business decision of the laboratory.

Marijuana cultivation, both indoor and outdoor, is associated with a variety of pests, bacteria, and fungi. Producers have used a wide variety of pesticides to reduce insect infestation. Pesticide misuse poses serious health risks to consumers, and exposure can result in a variety of well-documented symptoms, such as difficulty breathing,

abdominal pain, vomiting, dizziness, and muscle cramps. Additionally, some pesticides have been found to be carcinogenic (Taylor & Birkett, 2019).

Emerging literature and multiple studies, both nationally and globally, indicate that marijuana and marijuana products can become contaminated and must be tested to protect public health (Feldman, 2015; Subritzky, Pettigrew & Lenton, 2017; Feldman, 2015; Craven et. al., 2019; Seltenrich, 2019). Marijuana and its products can be contaminated with microbiological contaminants, such as mold or salmonella, potentially hazardous growth enhancers, and heavy metals such as chromium and lead. While marijuana in any form may be prone to contamination, extracts and concentrates may present a greater risk because any contaminants will become concentrated during processing (Seltenrich, 2019). To protect consumers against exposure to pesticides, solvents, and other contaminants, marijuana and marijuana products must be tested to ensure they are safe for consumption.

Current testing requirements for recreational marijuana are intended to ensure that products for sale are safe and have accurate potency levels. However, Washington state recreational marijuana products are not required to be tested for pesticides and heavy metals, and although not precluded from doing so, many producers and processors do not test for either, and Washington is the only state that does not require this testing. Based on a number of elements, including consumer concern and national best practices, it has become evident that standardized testing for *all* marijuana products produced, processed, and sold in Washington State is necessary.

There is no guidance available to the WSLCB or any other state agency regulating marijuana from federal agencies who set standards for agriculture, food, and other products because marijuana remains classified as a Schedule I drug, and federally illegal. This presents regulatory challenges to the WSLCB, regulators throughout the country, and the industry since there is limited funding to support research on how marijuana tainted with potential toxins affects humans. However, while the possible health impact of consuming marijuana products with unapproved pesticides is an emerging area of research, the overarching goal of the WSLCB is to protect public health and safety, and to assure that all products sold within the I-502 market are safe for all consumers.

Recently, concern around the composition and safety of marijuana concentrates for inhalation has highlighted the need to assure that all marijuana products are tested for the presence of harmful compounds and other contaminants. The proposed rule amendments and phase-in plan offer a reasonable time frame that provides both licensees and accredited labs the opportunity to adjust business models where necessary, and offers options to prepare for additional fields of testing either immediately or over an extended, but finite period of time.

Need for Withdrawal of Original CR102 Proposal

After the original rule proposal was filed on January 22, 2020 that set a public hearing for March 18, 2020, Governor Inslee declared a state of emergency regarding the COVID-19 pandemic. The Governor subsequently issued several proclamations that included limits on public congregation, and established social distancing guidelines. These proclamations severely limited the agency's ability to conduct public hearings as required under chapter 34.05 RCW. On March 11, 2020, the Board continued the March 18 public hearing on this proposal that to April 1, 2020.

On March 23, 2020, Governor Inslee issued the first Stay Home, Stay Health proclamation. Because there were no viable options for the Board to hold a public hearing that complied with the Stay Home, Stay Health proclamation and subsequent updates, the Board was unable to hold a public hearing on the proposed rules on April 1, 2020. On March 27, 2020, and consistent with RCW 34.05.335 and WAC 1-21-060, the Board withdrew its proposed rulemaking filed on March 11, 2020 as WSR 20-07-052 as a continuance of proposed rulemaking filed on January 22, 2020 as WSR 20-03-076.

The Board's intention in taking this action was to refile a new CR102 regarding proposed marijuana quality control rules as soon as reasonably possible, and once virtual stakeholder engagement options became available. It was clearly articulated at the March 27 meeting that the Board was *not* redrafting rules for this project. The only change to the re-filed CR102 rule package would be the hearing date, potentially the forum for the public hearing, and timelines regarding phase in. The purpose of the withdrawal was to merely place the project on pause until venue and method for holding a public hearing were solidified and available. The substance of the rule proposal would not change, and has not changed.

SECTION 2:

Is a Significant Analysis required for this rule?

Under RCW 34.05.328(5)(a)(i), the WSLCB is not required to complete a significant analysis for this or any of its rules. However, RCW 34.05.328(5)(a)(ii) also provides that except as provided by applicable statute, significant analysis applies to any rule of any agency, if voluntarily made applicable by the agency.

The WSLCB voluntarily asserts that the proposed amendments to WAC 314-55-102 meet the definition of legislatively significant as described in RCW 34.05.328(5)(c)(iii)(C) because they are rules other than procedural or interpretive rules that adopt new, or make significant amendments to, a policy or regulatory program.

The proposed amendments to WAC 314-55-101 and WAC 314-55-1025 are exempt under RCW 34.05.328(5)(b)(iv) because they make changes and clarify language without changing rule effect. However, because the WSLCB invited the licensed

community to engage in significant discussion around whether to make substantive revisions to WAC 314-55-101, those revisions, although exempt from this analysis, are discussed here. This analysis is not required by chapter 34.05 RCW, but provided to describe the agency's position and reasoning, and establish an administrative record.

For these reasons, the WSLCB voluntarily offers this significant analysis.

SECTION 3:

Clearly state in detail the general goals and specific objectives of the statute that the rule implements.

The proposed rules implement chapters 69.50 and 69.51A RCW. These chapters codified Initiative 502 (2013), known as I-502, and Second Substitute Senate Bill 5052 (Chapter 70, Laws of 2015), known as 2SSB 5052.

The stated objective of I-502 was to “stop treating adult marijuana use as a crime and try a new approach” to achieve three specific goals, one of which was to bring marijuana into a tightly regulated, state-licensed system similar to that for controlling alcohol.

Similarly, the stated objective of 2SSB 5052 was to regulate the use of medical marijuana, to achieve three specific goals, one of which was to establish consistent testing, labeling, and product standards.

The proposed rules implement the goals and objectives of chapters 69.50 and 69.51A RCW by revising and updating testing and product standards for marijuana products produced, processed, and sold within the licensed Washington State system.

SECTION 4:

Explain how the department determined that the rule is needed to achieve these general goals and specific objectives. Analyze alternatives to rulemaking and the consequences of not adopting the rule.

The proposed rules realize and embody the intent I-502 and 2SSB 5052 by establishing appropriate, uniform testing standards for marijuana products to assure all products available at retail are safe for human consumption, and that those products meet or exceed product purity standards. The proposed rules align the existing testing requirements for recreational and medically compliant products by supporting greater access to safe products for medically compromised consumers, while at the same time, assuring quality and purity standardization of all marijuana products available to Washington State consumers.

Rules are needed to establish enforceable standards for processors and producers, and assure that marijuana testing labs are aligned with and understand product testing requirements.

SECTION 5:

Explain how the agency determined that the probable benefits of the rule are greater than the probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.

The proposed rules directly apply to licensed processors and producers who will bear the costs of additional testing requirements. *Ultimately, however, consumers will bear the cost of these additional tests.*

The proposed rules *indirectly* apply to accredited testing laboratories who will charge for, and conduct testing of marijuana products.

It is important to note the distinction in the applicability of these proposed rules. The proposed rules do not change or alter the laboratory accreditation process, or revise any testing method development or validation processes labs may currently have in place. Marijuana testing labs in Washington State use varying business operating models, and each lab is responsible for, and independently chooses its own business model. While the proposed rules increase the required testing for marijuana products, they do not require testing labs to offer the full suite of tests. Marijuana testing labs have the option to offer all tests under the proposed rules. However, at this time, since the WSLCB's authority to regulate labs is limited solely to accreditation, whether or not labs offer all tests as proposed in these rules is a business decision borne solely by each lab, even when lab accreditation is transferred to the Department of Ecology.

Comparatively, the proposed rules will change marijuana product testing requirements as they apply to licensed processors and producers. As a result, the proposed rules are anticipated to have an initial cost impact on existing licensed processors and producers.

1. WAC 314-55-101 – Quality control (formerly assurance) testing protocols.

Description of the proposed rule:

Originally entitled, “quality assurance sampling protocols,” this section has been renamed “Quality control sampling.” This section describes how licensees collect representative samples of marijuana, usable marijuana, or marijuana infused products produced or processes by the licensee to accredited, independent third-party laboratories for inspection and testing to certify compliance with quality control standards established by the WSLCB, consistent with RCW 69.50.348.

The proposal does not substantively change current rule. However, language has been updated and redesigned to increase readability, flow, and provide clarification, and

because WAC 314-55-101 and WAC 314-55-102 are closely related, the WSLCB offers this analysis to transparently discuss and memorialize that agency's reasoning on these proposed amendments. These revisions include referring to "separate samples" as "subsamples," clarifying current language around retrieval and transportation for quality control, clarifying limitations on adulteration of quality control samples that could circumvent contamination testing detection limits, and clearly stating under what circumstances a lab must reject or fail a sample.

The WSLCB received a number of comments regarding current rule requirements, both in writing and orally, although these comments did not embody or represent broad licensee or lab agreement on any specific theme or themes. Comment regarding sampling protocol, lot size, increased cost to producers and processors, along with comments that did not pertain to this section of rule were gathered up to, during, and after the first listen and learn session on April 9, 2019, through the end of December, 2019.

As a result, the WSLCB reorganized this section of rule, and proposes to retain the current minimum of four separate subsamples from each marijuana flower lot up to five pounds. Similarly, certified labs may still retrieve samples from a marijuana licensee's premise and transport those samples. Labs may also continue to return any unused portion of the samples, and the proposal provides that labs may also destroy any unused portion of the samples, as well. Additionally, language regarding sampling and adulteration was updated, simplified and reorganized without substantive impact on current requirements.

Cost/Benefit Analysis:

The proposed rules reaffirm existing sampling protocols designed to reduce, to the extent possible, product contamination during and after sample deduction. As a result, there are no anticipated increase in compliance costs for this section of rule. The public benefits from the standards established in the current guidelines. Since there are no substantive revisions to this rule section, costs and benefits are analyzed in narrative only.

Retaining the five pound lot size for sample collection continues to reduce the possibility of non-representative samples. Although the concept of expanding lot size to ten pounds or more was discussed during rule development, no verifiable evidence or data was submitted to support the idea that a representative sample could be realized in larger lot sizes, nor was there any consensus between any of the commenters regarding lot size. Even if the lot size were to be increased, the same number of representative samples must be taken from the lot for sampling. It is known that the rejection rate for larger lot sizes, such as 50 pounds, is substantially higher than that of a 5 pound lot, and if the entire 50 pound lot must be destroyed, producers will suffer greater loss. Retaining the five pound lot size decreases that possibility, and also decreases the possibility of random testing error that may not be realized with larger lot sizes.

Several commenters suggested that Washington State consider lot sizes up to 50 pounds consistent with or similar to California and Oregon standards. The WSLCB offers that in both Oregon and California, only labs deduct samples substantially increasing cost and regulatory oversight. In Washington, however, licensees may deduct samples, and normally do. Additionally, there are other differences between the regulatory structures between these states that do not align with the Washington State framework.

For example, in California, all products must be first held by a *licensed distributor* – not the producer or processor - while they are tested by an independent, *licensed* laboratory. Licensed testing laboratories do not publish their prices, and the costs of testing services are not publicly available. Testing prices depend on the number of samples to be tested, the type of product testing, and the specifics of the contract between the distributor and the laboratory, among other factors. Similarly, Oregon labs perform every step of testing, including collecting and processing samples, performing compliance tests, and reporting results. Oregon also requires that, among other things, individuals performing “sampler” functions must be employed by an Oregon accredited laboratory, provide proof of training, and be licensed to transport required quantities of “usable marijuana items. These additional layers of regulatory oversight add significant cost to testing requirements.

While both California and Oregon allow larger batch weights or lot sizes, the sample increments for each lot or batch are proportionate and similar to Washington’s current requirements, reaffirmed in this rule proposal.

The WSLCB finds that since the proposed sampling protocols do not contain any substantive changes since the last rule revision in 2017, this section of the rule proposal is not anticipated to result in additional compliance cost.

2. WAC 314-55-102 – Quality control (formerly assurance) testing

Description of the proposed rule:

Originally entitled, “Quality assurance testing,” this section has been renamed “Quality assurance and quality control.” Previously, required quality control tests included five tests – moisture analysis, potency analysis, foreign matter screening, microbiological screening, and mycotoxin screening for most products. The proposed rules reaffirm these required tests, and add testing for pesticides and heavy metals for all product types through an incremental phase-in plan. The proposed rule also provides that testing for terpene presence or concentration is required if a processor or producer indicates or states terpene content on any product packaging, labeling or both.

The WSLCB contracted with Industrial Economics through the Governor’s Office of Regulatory Innovation and Assistance (ORIA) in early 2019 to perform a preliminary small business economic impact statement (SBEIS) under the framework of chapter

19.85 RCW for this particular section of rule. In most circumstances, the SBEIS is not completed until the actual rule proposal is prepared. In this instance, however, a preliminary SBEIS was prepared to serve solely as a basis to understand estimated impact threshold only because data such as employment, revenue, and costs are not established in this particular industry as they are in other, more established industries. The preliminary SBEIS was drafted based on draft conceptual rules offered in April 2019, as well as on the best publicly available data at the time.

It is critical to understand the differences between what an SBEIS does and is required for, and what a cost/benefit analysis does and is required for under RCW 34.05.328. The WSLCB intends to provide educational opportunities to interested parties regarding each of the processes and their very different purposes in the future. The WSLCB encourages interested parties to review [ORIA's frequently asked questions](#) regarding SBEIS and significant analysis.

Analysis

A key objective of regulating marijuana is ensuring that products sold at retail are as safe as possible for consumption (Pacula, Kilmer, Wagenaar, Chaloupka & Caulkins, 2014). The use of pesticides on marijuana or cannabis crops is a complex and often confusing issue for a range of stakeholders, including cultivators, regulators, retailers, labs, consumers, and public health researchers. While marijuana growers are interested in pest management to defend crops (referring to pest in the broadest sense), invertebrates, weeds, pathogens, and insects, regulators are concerned with pesticide management and reducing potential for risk to public health, particularly consumers and workers (Ehler, 2006). No pesticide is currently registered in the US specifically for cannabis (Stone, 2014; Thomas & ElSohly, 2016).

Like most crops grown in the United States, marijuana is vulnerable to pests. However, unlike most crops, the Environmental Protection Agency (EPA) has not approved any pesticides for use on marijuana plants, and 28 U.S.C § 136j(a)(2)(G) dictates that a pesticide may not be used inconsistently with its labeling. Therefore, application of any pesticide not approved for general use on marijuana plants violates federal law. This leaves marijuana producers with the options of either (1) using no pesticides; (2) using pesticides that do not require EPA approval for use on crops; or (3) illegally using pesticides approved for other crops.

The toxicological effects of pesticides, heavy metals, mycotoxins, and pathogenic microbes is well-documented in literature, including their carcinogenicity, neurotoxicity, and teratogenicity (Bennett & Klich, 2003; Damalas & Eleftherohorinos, 2011; Denkhau & Salnikow, 2002; Derbalah et al., 2019; Duruibe et al., 2007; Gargani et al.; 2011; Gud et al., 2018; Mostafalou & Abdollahi, 2013, 2017; Pham et al., 2010; Stone, 2014; Taylor et al., 1982; Ye et al, 2017). Exposure to these contaminants through consumption of marijuana products may lead to short- and long-term adverse effects. A number of pesticides have shown carcinogenic and mutagenic effects in humans and could be lethal when overdosed (Craven, Wawryk, Jiang, Liu & Li, 2019).

Of the 11 states that have legalized both medical and recreational marijuana, Washington is the only state that does not require pesticide and heavy metal testing for all product (Seltenrich, 2019; Taylor & Birkett, 2019; Feldman, 2015). Colorado, Oregon and California all require pesticide and heavy metal testing. States with only medical marijuana programs, such as Michigan, Rhode Island, and Maryland require testing for solvents, microbiological contaminants, as well as pesticides and heavy metals.

Currently, Washington marijuana testing requirements are more stringent for products identified as DOH compliant than they are for products considered recreational. While recreational and DOH compliant marijuana must be tested for microbiological contaminants, only DOH compliant product is tested for pesticides and heavy metals.

WSLCB must consider the implications for how the legal recreational cannabis market may best be regulated in the public health interest. From that perspective, the basic issue with substances or activities that may pose risk of harm is the need to limit harm (Room & Ornberg, 2019). Considering the various methods of marijuana consumption, marijuana treated with pesticides likely present more health hazards to consumers than food crops or tobacco. Both acute and long term exposure to certain contaminants can result in a range of adverse health effects.

For example,

- Exposure to the insecticide bifenthrin, which is part of the pyrethrinoid family, may be a carcinogen and ingestion can cause headaches, vomiting, and respiratory irritation.
- Exposure to pyrethrins can cause difficulty breathing, vomiting and diarrhea when inhaled, and over prolonged periods may cause tissue damage in respiratory passages, and tremors.
- Microbiological contaminants, such as salmonella, can cause serious infections in people with weakened immune systems.
- Heavy metals, such as chromium may be carcinogenic to humans (Kim, Kim & Seo, 2015). Lead has been found in marijuana in tests performed in Germany and has no level of safe exposure. Heavy metals can affect the nervous system, cause kidney damage, slow brain development, and cause miscarriages. Arsenic is present in some groundwater sources and fertilizers that could be used on marijuana. Long-term exposure to arsenic can cause cancer and skin lesions, and acute exposure may cause vomiting, diarrhea, and even death.

Additionally, in 2016, the Association of Public Health Laboratories published a report for state medical marijuana testing programs that recommended testing for heavy metals in addition to solvents, pesticides, and micro biological contaminants. According to the report, heavy metals may accumulate in the body; some are carcinogenic, and considered to cause a variety of diseases. Marijuana is efficient at absorbing and storing heavy metals and other pollutants found in soil and water, which increases the risk that marijuana users could ingest or inhale heavy metals.

The best way to avoid pesticide and heavy metal consumption would be to guarantee that pesticides are not on marijuana plants at all. Commercial growers abroad have grown marijuana in large quantities using “biocontrols” such as predatory insects and beneficial microorganisms. However, in the United States, marijuana cannot be classified as “organic” because the term is federally regulated, and the United States Department of Agriculture (USDA) does not recognize marijuana as a legal crop.

While the current rules represent the WSLCB’s efforts to assure that marijuana testing factors in some of the known dangers of pesticides and solvents, the proposed rules add testing requirements for pesticides and heavy metals to protect public health and safety to the greatest extent possible. Existing language regarding remediation and retesting is reaffirmed and refined in the proposed rule text.

The proposed phase in plan for the addition of pesticides and heavy metals is provided as Attachment A to this significant analysis, and incorporated herein by reference. The proposed rules contemplate, and are written to support and control for this phase-in plan.

Cost/Benefit Analysis:

The WSLCB proposes to phase-in these requirements to provide additional time for impacted parties to adjust business models as needed. Attachment A provides a phase-in table. Attachment B describes estimated cost ranges if pesticide and heavy metals testing are added to the current suite of tests. Since this rule project began in August 2018, impacted parties have had over eighteen months to consider and prepare for this proposal, and under the proposed phase-in plan, will have an additional extended period of time to adjust their self-selected business models.

The phase-in plan provides that upon the effective date of these proposed rules, should they be adopted, that existing levels of testing would remain the same, and only the technical revisions of the rule would go into immediate effect. At this time, the WSLCB anticipates an effective date of September 4, 2020. This would provide licensees six months to prepare and adjust for the pesticide testing requirement, and for labs to prepare to offer the additional testing if they chose, with the pesticide testing requirement anticipated to go into effect on March 1, 2021. Then, licensees would have an additional six months to prepare for the addition of heavy metal testing, and it is anticipated that by September 1, 2021, there will be more than one lab available and prepared to offer this testing.

As noted previously, the CR101 was filed in this rule project in August of 2018, and it is anticipated that these proposed rules would be fully effective in September of 2021. Under that timeline, licensees will have had over three years to adjust business models and plans in preparation for these rule revisions that align the state of Washington with national practice. The WSLCB anticipates that these rules will not result in any additional administrative costs to licensees for the following reasons:

- Sampling practices and requirements are essentially the same. The WSLCB does not anticipate that these rules will result in additional employee time to deduct or handle samples;
- Administrative tasks, such as completing laboratory forms or documents, travel, or other costs associated with moving product to labs for testing are the same, and will not result in additional cost.

The WSLCB recognizes that these rules may result in additional costs to producers/processors, and has sought to mitigate those costs through a phased in approach. However, quality control testing is critical to ensuring that marijuana processed, produced, and sold in Washington State is free from harmful contaminants and safe for human consumption, regardless of the method by which that product is consumed.

As noted above, the use of pesticides on marijuana crops is complex, and no state “has it right” (Seltenrich, 2019). While producers are interested in pest management to defend crops (referring to pest in the widest sense as invertebrates, weeds, pathogens, and insects), regulators are interested in pesticide management and reducing possible risk to public health, and consumers in particular (Ehler, 2006; Subritzky, Pettigrew & Lenton, 2016). Also as noted above, no pesticide is currently registered in the US specifically for marijuana (Stone, 2014; Thomas & EISOhly, 2015). The WSLCB has an overarching responsibility to assure marijuana products are safe for human consumption. This proposal is an initial, conservative step toward assuring that all marijuana products produced and sold in Washington State meet stringent standards designed to protect the public health and safety.

SECTION 6:

Identify alternative versions of the rule that were considered, and explain how the agency determined that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated previously.

Rule Development and Stakeholder Engagement Process

Virtually all of the comments received from licensees and labs focused on individual business viability. Fewer than five comments out of over 300 received during the initial stakeholder engagement process prioritized public health and safety, concentrated on ways to increase product purity or consumer confidence, or tied the production of safe products to existing business models.

In contrast, the majority of the comments from consumers received after the CR101 was filed concentrated on a presumption of recreational product safety. For example,

“As a long time consumer, I was shocked to learn that pot is not tested for pesticides! I learned this from one of the budtenders I recently spoke to in Maple Valley, which was funny because every other budtender I've ever talked to has sworn up and down that pot IS tested for pesticides. However, this budtender seemed incredibly well informed and assured me that no,

pot is NOT tested for pesticides in Washington. I realize you guys probably have a lot to do and focus on, but this seems like a no brainer to me. Why wouldn't we require pot to be tested for pesticides? Considering we are concentrating the pot and then combusting it, literally changing the chemical make up of the flower, it seems irresponsible to not require pesticide testing in the legal market for all pot products. As a consumer I want to know that the product I'm purchasing is safe and thus pesticide testing seems immanent [sic]. Please do the right thing, make haste, and require mandatory pesticide testing for all legal pot products now!"

- Received in WSLCB rules in-box, September 14, 2018

The WSLCB's stakeholder engagement process encouraged parties to:

- Identify burdensome areas of existing and proposed rules;
- Propose initial or draft rule changes; and
- Refine those changes.

During the rule development process, the WSLCB hosted two public "Listen and Learn" sessions, and collected significant input from industry members, associations and other interested parties, representing processors and producers across tiers and many others. These meetings and comment periods were announced via GovDelivery and other media platforms, and open to the public, licensees, and any interested party to encourage community input. The WSLCB is aware that this is a topic of interest to many Washington State citizens, regardless of their positionality related to the regulatory structure.

It is important to note that these "Listen and Learn" sessions were among the first that the WSLCB offered to increase and enrich stakeholder engagement in the rule development process. Initially, and understandably, in person participation was somewhat guarded as the licensed community and others became familiar with the approach, and the concept of collaborative rule making. It is also important to note that few producers and processors attended the first meeting despite all licensees receiving notice of the meeting more than two weeks in advance. By the second session, attendees were better prepared to present and discuss ideas and solutions, and the conversation continued well beyond the scheduled session time, although again, few producers and processors attended in person even though messaging was broadly distributed to all licensees through several platforms. However, several of these entities provided written comment in the way of email to the rules coordinator during the meeting. These were shared at the meetings, and throughout the rule development process.

Additionally, agency staff visited the facilities of processors, producers, and labs who wished to participate in the process. To the extent possible, the qualitative and quantitative data presented in this significant analysis represent the multiple dimensions and broad spectrum of positions, as well as mitigation strategies offered by all participating parties. The WSLCB also coordinated rule development with staff the Washington State Department of Health, the Washington State Department of Ecology, and the Washington State Department of Agriculture where possible and appropriate.

Although summarizing comments to provide brief descriptions of issues and themes related to the proposed rule set in general practice, doing so in this context was extremely challenging because over 300 comments were collected as a result of the two Listen and Learn sessions, and throughout the rule development process. These comments represented an extremely broad, often conflicting range of opinions and positions, along with multiple suggestions regarding draft conceptual rules. As a result, thematic organization was virtually impossible.

Despite criticism that the comments were not distilled and summarized when initially publicly shared, agency staff worked to preserve comments in their native form to assure not only transparency, but to make sure that each commenter was offered the opportunity to review and digest comments and thoughts of the entire community in their native form, as opposed to a curated, summarized version of comments interpreted by the WSLCB. The WSLCB intends to continue sharing comments in their native form, regardless of volume, moving forward.

Many of the suggestions offered required legislative or other action beyond the scope of the Board's regulatory authority. Other suggestions included creating new WSLCB programs, expanding on existing limited contracts, requesting rule changes that exceed the scope of the CR101 for this project, or suggesting internal operational changes that may exceed WSLCB available funding and capacity. Some of these suggestions included:

- WSLCB should create carve outs or exemptions from any additional product testing for Tier 1 producers and sun growers. Sampling frequency should be reduced for these Tier 1 producers.
- Sun growers should be “empowered” to select their own lot size. (Received December 29, 2019).
- Tier 1 exports of cannabis from Washington should be exempt from all cannabis sampling requirements. It was asserted that the receiving State or Country's testing requirements should dictate testing criteria.
- The WSLCB should immediately engage in emergency rulemaking for pesticide and heavy metal testing while simultaneously extending the period of the CR102, which at the time of the comment was not yet been presented to the Board or filed.
- The WSLCB should reduce the statutorily established tax rate on marijuana products from 37% to 20% to accommodate the increased cost of testing.
- The WSLCB should require the WSDA to perform 500 – 1000 random tests per month. WSLCB enforcement should collect random samples, and contract with “a lab for expanded testing.”

- WSLCB should not require “cannabis farmers to significantly increase spending with Washington’s cannabis labs until Washington State Department of Ecology accreditation is complete.” (Received December 29, 2019)
- Enterobacteria testing should be changed to an indicator test instead of a pass-fail test with follow up testing for pathogens, if high levels of enterobacteria are found (Received December 29, 2019).
- The WSLCB should remove pyrethrins and piperonyl butoxide from the list of pesticides with action levels prior to implementing additional testing requirements. (Received December 29, 2019).
- The WSLCB should not remove pyrethrins and piperonyl butoxide from the list of pesticides with action levels.
- The WSLCB should allow EPA Method 6200 to be self-performed at Tier 1 facilities for heavy metals compliance.
- The WSLCB should allow Tier 1 producers to combine samples and provide a single report for pesticide compliance. Tier 1 licensed farms would then be designated a quarantine facility and training developed to identify live pests and carcasses prior to combining samples. Tier 1 producers would be allowed to transport cannabis in Washington State prior to testing to accomplish this program.
- The WSLCB should allow Tier 1 producers to fundraise by selling directly to the public.
- Rather than adopt heavy metal testing, the WSLCB should develop a program to verify processors have the Material Safety Data Sheets (MSDS) for all raw materials used in their vape hardware and heavy metal testing results provided by their hardware distributor and/or manufacturer. WSLCB should perform random testing for heavy metals in vape cartridges. (Received December 29, 2019).
- Statistically representative samples should be taken from the lot for testing purposes and results should provide measures of variance so that potency can be reported and better represent the harvest population. (Received December 29, 2019).
- “Barely detectable levels” of pesticides or herbicides should trigger further investigation prior to the assessment of penalties, due to environmental contamination issues. (Received December 29, 2019).

Other concerns included:

- From processors/producers, concern that requiring tests for pesticides and heavy metals would negatively impact businesses, from both the producer/processor perspective:

“I own a 502 producer/processor and I just heard that there is discussion about adding mandatory heavy metal and pesticide testing for every 5-pound lot of product.

Well, if you want to finish the job of driving the small growers out of business, by all means proceed with the least cost-effective way of dealing with this "problem." The same effects can be obtained from a random testing program or from allowing harvest-sized batches, but hell, all those small growers are raking in the money, so they are ripe for a little more squeezing, right?

And by the way, do you know how many people have been killed by "contaminated" weed worldwide in the history of man? Zero. Do you know how many have been sickened? Zero confirmed. Good thing you are addressing this problem! I feel safer already!”

- From labs, general concern that increasing lot size would negatively impact business:

“Standardized testing is preferred. Most labs are barely making it. Doubling lot size, millions in equipment. Some labs are undercutting budget. Currently, charge \$90 for i502 testing (mycobio/potency/everything) and makes \$6 profit. Others charge \$70. Trace charges \$180 for the same tests. Time of service payments would help. Proposed rules would cut revenue in half.”

- Three processor/producers asserted that the public is disinterested in products tested for pesticides and heavy metals:

“At this time consumers have the option to buy product that has been tested for heavy metals and pesticides in the form of DOH compliant products. Legislation establishing DOH certified product type were adopted in 2015 however consumer demand for these product types has remained tepid. The public has clearly demonstrated a lack of interest in products tested for pesticides and heavy metals and the consumers that are interested in these standards are already served by the DOH certification. In response to the public’s lack of interest in DOH compliant products some producer and processor licensees have sought regulatory interference in the marketplace in the form of increased testing costs and standards to stymie market competition. Such calls to “level the playing field” amount to predation through regulation.”

- Comments from consumers expressed concern that recreational products were not tested for pesticides and heavy metals:

*“It has come to my attention that cannabis is (still) not tested for pesticides in the adult use market. This seems like it is a necessary test that may have been overlooked by the Liquor and Cannabis Board. **I am writing you today to ask that you review your rule making on this issue and analyze whether requiring pesticide testing in the adult use market makes sense for consumer and patient health and safety.** I realize that the data and research are still out onto whether pesticides are "bad" for you, but I would anticipate that a conservative approach, considering your mission, would make sense. I also recall seeing*

a story in The Stranger a while ago, that showcased a random selection of retail cannabis of which a large portion failed a pesticide screening. Even with that article in 2016, it appears that the Liquor and Cannabis Board has hesitated to address illegal pesticide usage in the 502 market. I kindly ask that you review your rules and regulations around mandatory pesticide testing for adult use products, while taking into account the effect your rule changes will have on licensees. ***Consumer safety should be the forefront of a state agencies concern, followed by making sure your rules do not overly burden the small businesses who are the backbone of the cannabis industry.*** – LCB Rules in-box, 9/13/18

Alternative Versions of the Rule and Least Burdensome Alternative

Two versions of draft conceptual rules were offered for stakeholder comment. Only one stakeholder offered alternative language, or specific suggested revisions. Most comments were general concepts about rule revision rather than actual rule language, or complaints regarding current rule. As noted above, most comments spoke to the perceived effect a rule revision would have on businesses. Several attendees indicated that they would offer specific rule language, but at the time of original writing and as of this update on May 1 2020, no other language has been offered for consideration.

Summarized below are brief descriptions of issues related to the proposed rule set and how the agency collaborated with stakeholders to mitigate potential burden associated with rule compliance:

Issue	Potential Burden	Mitigation Strategy
Lot size	Producer/Processor: No consensus on whether this would increase or decrease burden. Some asserted that larger lot sizes would reduce costs; others asserted that lot size should remain the same to assure a truly representative sample.	Proposal maintains current 5lb lot size with a 12-month phase period to allow licensees businesses to adjust.
Addition of pesticide and heavy metal testing to current suite of required I-502 tests	Producer/Processor: No consensus on whether this would increase or decrease burden. Some indicate, as they did in 2016, that additional tests will reduce business viability; others agreed that testing was necessary.	Proposal maintains addition of pesticides and heavy metals with an incremental 12-month phase period to allow licensees businesses to adjust.

SECTION 7:

Determine that the rule does not require those to whom it applies to take an action that violates requirements of another federal or state law.

The rule does not require those to whom it applies to take action that violates requirements of federal or state law.

SECTION 8:

Determine that the rule does not impose more stringent performance requirements on private entities than on public entities unless required to do so by federal or state law.

The rule does not impose more stringent performance requirements on private entities than on public entities.

SECTION 9:

Determine if the rule differs from any federal regulation or statute applicable to the same activity or subject matter and, if so, determine that the difference is justified by an explicit state statute or by substantial evidence that the difference is necessary.

The rule does not differ from any applicable federal regulation or statute.

SECTION 10:

Demonstrate that the rule has been coordinated, to the maximum extent practicable, with other federal, state, and local laws applicable to the same activity or subject matter.

The agency coordinated to the extent possible with the Department of Health, the Washington State Department of Ecology and the Washington State Department of Agriculture.

Attachment A

Phase-in of Required Quality Control Testing	Lots of marijuana flowers or other material that will not be extracted	Marijuana Mix	Concentrate or extract made with hydrocarbons (solvent based made using n-butane, isobutane, propane, heptane, or other solvents or gases approved by the board of at least 99% purity)	Concentrate or extract made with a CO2 extractor like hash oil	Concentrate or extract made with ethanol	Concentrate or extract made with approved food grade solvent	Concentrate or extract (nonsolvent) such as kief, hash, rosin, or bubble hash	Infused cooking oil or fat in solid form
September 4, 2020 (Effective Date)								
Moisture analysis	√	√						
Potency analysis	√	√	√	√	√	√	√	√
Foreign matter inspection	√	√						
Microbiological screening	√	√				√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing
Mycotoxin screening	√	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing
Residual solvent test			√	√	√	√		
March 1, 2021								
Moisture analysis	√	√						
Potency analysis	√	√	√	√	√	√	√	√
Foreign matter inspection	√	√						
Microbiological screening	√	√				√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing
Mycotoxin screening	√	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing
Residual solvent test			√	√	√	√		
Pesticides	√	√	√	√	√	√	√	√
September 1, 2021								
Moisture Content	√	√						
Potency analysis	√	√	√	√	√	√	√	√
Foreign matter inspection	√	√						
Microbiological screening	√	√				√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing
Mycotoxin screening	√	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing	√	√ Field of testing is only required if using lots of marijuana flower that has not passed QC testing
Residual solvent test			√	√	√	√		
Pesticides	√	√	√	√	√	√	√	√
Heavy metals	√	√	√	√	√	√	√	√

Attachment B

Scenario	Number of Samples Tested Annually	\$165 Per Sample ³	\$225 Per Sample ¹	\$400 Per Sample ¹
Low # of Samples	72 ¹	\$11,880	\$16,200	\$28,800
High # of Samples	2,080 ¹	\$343,200	\$468,000	\$832,000
Average # of Samples	184 ²	\$30,360	\$41,400	\$73,600
Median # of Samples	101 ²	\$16,665	\$22,725	\$40,400
Notes: ¹ Estimates based off of information collected in interviews by Industrial Economics Incorporated, Spring 2019 ² Figures based on traceability data, as of 1/2020 ³ Cost based on currently available pricing in Washington state, as of 1/2020				

References

- Bennett, J. & Klich, M. (2016). Mycotoxins. *Clinical Microbiology Review*. (16), 497–516.
- Craven, C., Wawryk, N., Jiang, P., Liu, Z., & Li, X. (2019). Pesticides and trace elements in cannabis: Analytical and environmental challenges and opportunities. *Journal of Environmental Sciences*, (85)82–93. doi: 10.1016/j.jes.2019.04.028.
- Damalas, C. & Eleftherohorinos, I. (2011). Pesticide exposure, safety issues, and risk assessment indicators. *International Journal of Environmental Research and Public Health*. (8)1402–1419.
- Denkhaus, E. & Salnikow, K. (2002). Nickel essentiality, toxicity, and carcinogenicity. *Critical Review of Oncology and Hematology*. (42)35–56.
- Derbalah, A., Chidya, R., Jadoon, W. & Sakandugawa, H. (2019). Temporal trends in organophosphorus pesticides use and concentrations in river water in Japan, and risk assessment. *Journal of Environmental Science*. (79)135–152.
- Duruibe, J, Ogwuegbu, M., & Egwurugwu, J. (2007). Heavy metal pollution and human biotoxic effects. *International Journal of Physical Sciences*. (2)112–118.
- Ehler, L. (2016). Integrated pest management. *Pest Management Science*. 62(9).
- Feldman, J. (2014). Pesticide Uses in Marijuana Production. *Beyond Pesticides*. , 34(4).
- Gargani, Y., Bishop, P., and Denning, D. (2011). Too many mouldy joints – marijuana and chronic pulmonary aspergillosis. *Mediterranean Journal of Hematology and Infectious Disease*. (3)1–5.
- Goud, K., Kumar, S., Gobi, K., & Kim, K. (2018). Progress on nanostructured electrochemical sensors and their recognition elements for detection of mycotoxins : a review. *Biosensors & Bioelectronics*. (121)205–222.
- Kim, H., Kim, Y. & Seo, Y. (2015). An Overview of Carcinogenic Heavy Metal: Molecular Toxicity Mechanism and Prevention. *Journal of Cancer Prevention*, 20(4), 232–240. doi: 10.15430/jcp.2015.20.4.232.

- Mostafalou, S. & Abdollahi, M. (2013). Pesticides and human chronic diseases: evidences, mechanisms, and perspectives. *Toxicology and Applied Pharmacology*. (268)157–177.
- Mostafalou, S. & Abdollahi, M. (2017). Pesticides: an update of human exposure and toxicity. *Articles of Toxicology*. (91)549–599.
- Pacula, R. L., Kilmer, B., Wagenaar, A. C., Chaloupka, F. J., & Caulkins, J. P. (2014). Developing Public Health Regulations for Marijuana: Lessons From Alcohol and Tobacco. *American Journal of Public Health*, 104(6), 1021–1028. doi: 10.2105/ajph.2013.301766.
- Pham, J., Bell, S., Labora, S., Park, M., & Wales, S. (2010). Chronic necrotising pulmonary aspergillosis in a marijuana addict: a new cause of amyloidosis. *Pathology* (42)197–200.
- Room, R., & Örnberg, J. (2019). Government monopoly as an instrument for public health and welfare: Lessons for cannabis from experience with alcohol monopolies. *International Journal of Drug Policy*, (74)223–228. doi: 10.1016/j.drugpo.2019.10.008
- Seltenrich, N. (2019). Cannabis Contaminants: Regulating Solvents, Microbes, and Metals in Legal Weed. *Environmental Health Perspectives*, 127(8), 082001. doi: 10.1289/ehp5785.
- Seltenrich, N. (2019). Into the Weeds: Regulating Pesticides in Cannabis. *Environmental Health Perspectives*, 127(4), 042001. doi: 10.1289/ehp5265.
- Stone, D. (2014). Cannabis, pesticides and conflicting laws: The dilemma for legalized States and implications for public health. *Regulatory Toxicology and Pharmacology*, 69(3), 284–288. doi: 10.1016/j.yrtph.2014.05.015.
- Subritzky, T., Pettigrew, S., & Lenton, S. (2017). Into the void: Regulating pesticide use in Colorado's commercial cannabis markets. *International Journal of Drug Policy*, (42)86–96. doi: 10.1016/j.drugpo.2017.01.014.
- Taylor, A., & Birkett, J. (2019). Pesticides in cannabis: A review of analytical and toxicological considerations. *Drug Testing and Analysis*. doi: 10.1002/dta.2747.
- Taylor, D., Wachsmuth, I., Shangkuan, Y., Schmidt, E., Barrett, T., Schrader, J., Scherach, C., McGee, H., Feldman, R., & Brenner, D. (1982). Salmonellosis associated with marijuana: a multistate outbreak traced by plasmid fingerprinting. *New England Journal of Medicine*. (306)1249–1253.

- Thomas, B. & ElSohly, M. (2016). *The analytical chemistry of cannabis: Quality assessment, assurance, and regulation for medical marijuana and cannabinoid preparations*. (Emerging issues in analytical chemistry). Elsevier/RTI international.
- Ye, M., Beach, J., Martin, J., & Senthilselvan, A. (2017). Pesticide exposures and respiratory health in general populations. *Journal of Environmental Science*. (51)361–370.

SOURCE	COMMENTER	WAC REFERENCE	THEME	COMMENT	DATE REC'D
April 9 Live Comment	Flipchart Note	WAC 314-55-101	3rd party sampling	3rd party sampling (could be licensed samplers, labs, etc.) (Two attendees suggested this option)	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	3rd party validation	3rd party validation/3rd party <u>trained</u>	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(1)(f)	Action limits	Definition of pesticides to be tested is unclear. Outside of the pesticides listed in the table under section 314-55-108, "The action level for all other pesticides that are not listed in the table below or not allowed under subsection (1) of this section is 0.1 ppm." This is an "infinite list" and it is impossible. See proposed testing guidelines.	4/4/2019
Email	Crystal Oliver/WSIA	None provided, but comments speak generally to WAC 314-55-102	Action limits	We are concerned about the current action limits associated with pyrethrin & piperonyl butoxide we have received many reports from farmers who state they are using pesticides that are on the approved as directed but are experiencing failures associated with these two items. There are also some studies, see attached, that indicate that some cannabis may naturally produce pyrethrin which makes an action limit for it even more problematic. Farmers should not be presented with a scenario where they are using an approved pesticide as directed and are subject to financial/ crop loss because the standards/action limits are set at an arbitrarily low number.	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Action limits	Action limits on approved pesticides - failing - pyrethrin	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Advisory committee	Work group that includes farmers (reps for all of industry)	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Advisory committee	Advisory board	4/9/2019
April 9 Live Comment	Kyle Capizzi	WAC 314-55-102	Advisory committee Terpenes = NO	Advisory committee topics are listed in our written comments. Ranges rather than percent. Homogenizing batches. Experts should advise on this. Challenging performance at random. Committee should be advising on testing parameters. QA testing for other additives. Terpenes are lost in processing, not removed. Most of this in writing.	4/9/2019
April 9 Live Comment	Jeff/Capital Analysis	WAC 314-55-1025	Proficiency testing	Important to have a base when testing. Use a bell curve method to have labs use. Should be blind and not blind. Every sample should be the same regardless of which test. We need defensible data. Need a system that supports us in court	4/9/2019
April 9 Live Comment	Jed Haney/Lab Guild	WAC 314-55-1025	Proficiency testing	Lab testing. If not blind, can't depend on labs honesty. Emphasize blind PT	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Proficiency testing	Blind testing (PT)	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Proficiency testing	Blind PT	4/9/2019
April 9 Live Comment	Jim MacCrae/Straightline Analytics	WAC 314-55-1025	Proficiency testing	Don't like that "board" is not capitalized. If you let the farmers test, product may be biased. Can you do the job when you are being watched? Blind testing off the shelf to make sure the labs are kept honest. Strengthen Recall and use it.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Cannabinoid concentration	Potency vs. cannabinoid concentration/profile	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Cannabinoid Concentration	Increase cannabinoid/terpenes into traceability	4/9/2019
April 9 Live Comment	Amber/Medicine Creek Analytics	WAC 314-55-102	Cannabinoid concentration	Potency is not correct term. Cannabinoid concentration or cofiles (sic) correct. CBD does have effect on brain. Science based testing with Limits of testing on the certificates. Science based board/SMEs should be working on these.	4/9/2019
Email	Alysia Honnold	N/A	Carve out for Tier Size/Production Choice	1. Lot Size: Crystal Oliver has some really good points here, would it be possible to allow larger lot sizes ONLY for outdoor farmers who harvest ONCE per year or even allow them to apply for an exception or something along those lines. Increasing lot size is going to give the big tier 3's an even bigger advantage, some producers don't even produce enough to test a full 5 lb lot and when they do, it is hard to sell it within 6 months and if lot size is increase the little guys are going to have to retest stuff if they do have more than five pounds, which i feel will only put more small guys out of business. There's already a big enough variation in testing from 5lb lots, increasing that is going to make it even less accurate. 2. There were lots of comments about using regulation on pesticides based on those set for food but that is not relevant since it is smoked, what about using those set for tobacco? 3. Testing products on the store shelves is really the only way to be certain the results listed, accurately represent the products in which they are on, but this is only true if the retail store keeps their products in a dark, cool environment. When the stores put things in cases on display with bright lights the light is degrading the composition of that marijuana, the light is also producing heat which even further degrades the marijuana, so by the time it reaches the consumer, the test results listed are likely no longer accurate. THE STORES SHOULD BE	8/29/19

Marijuana Quality Control Rules Project

Comments Received re WSR 18-17-041 (Filed August 2018)

Listen and Learn Sessions April 2019 and August 2019

				REQUIRED TO KEEP TESTED ITEMS IN SAME ENVIRONMENT PRODUCER AND PROCESSORS ARE REQUIRED, SPECIFICALLY LOW LIGHT. 4. Someone commented on putting a line item on receipt at retail level for pesticide testing, i think this would be a great idea to implement once all the labs have pesticide equipment. 5. Different requirements for different products: I think this was a great point that was brought up as far as requiring pesticide testing	
Email	Mark Ambler (TIPA)	N/A	Carve out for Tier Size/Production Choice	Please see the following comments and conceptual ideas in regards to today's Listen and Learn Forum on QA Testing: 1. TIPA requests review the Small Business Impact Study to quantify the ability of mitigation efforts to offset the detrimental impact of the rule. If mitigation is insufficient, Tier 1 producers should be exempt from the additional sampling requirements. 2. TIPA requests that EPA Method 6200 be allowed to be self performed at our facilities for heavy metals compliance. 3. TIPA requests that Tier 1 producers be allowed to combine samples and provide a single report for pesticide compliance. Tier 1 licensed farms would be designated a quarantine facility and training developed to identify live pests and carcasses prior to combining samples. Tier 1 producers would be allowed to transport cannabis in Washington State prior to testing to accomplish this program. 4. TIPA requests that Tier 1 producers be allowed to fundraise by selling direct to the public. 5. Some Tier 1 producers only have one harvest per year. Any sampling frequency greater than once per year would put those farms at a significant direct product cost disadvantage. Sample frequency should not be more frequent than once per year for Tier 1 producers. 6. All exports of cannabis from Washington should be exempt from all cannabis sampling requirements. The receiving State or Country's testing requirements should dictate testing criteria. 7. On July 13, 2019 some concepts were presented to all Tier 1 producers which would help to mitigate the costs with this potential rule (https://youtu.be/7aG3TAmSpPO). 8. This rule has the ability to completely destroy small cannabis farmers in Washington State. We recommend not moving forward unless the mitigation has been thoroughly vetted and quantified.	8/22/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-1025(5)(b)	Proficiency testing	PT's are scheduled by the vendors and out of control of the labs.	4/4/2019
Email	Mike Schmitt	WAC 314-55-102(1)(d); WAC 314-55-108	Chemical Abstracts Service	Kathy: Thank you again for setting up the forum and designing it to be a discussion/conversation rather than a one way push of information. You had mentioned to contact you if we thought of anything for the WAC since it is still in draft form. I would like to suggest adding the CAS (Chemical Abstracts Service) number to the solvents found in the table of residual solvents for WAC 314-55-102 (1)(d). Adding a standardized name/reference to the table can help to make sure that the correct chemical is referenced. This is similar to how the pesticides are referenced with a CAS number in WAC 314-55-108. If you have any questions, please feel free to contact me at my information below!	8/26/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(1)e	Clarification	The unit μ /daily should be clarified.	4/4/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(6)	Clarification	We received guidance from the LCB that labs can receive cannabis samples from the general public for testing. These samples are considered outside of Traceability. However, labs can only do tests for which they are certified. We have concerns allowing samples that are outside of Traceability and the LCB to be comingled with samples in Traceability. Consumers should be required to take samples to non-certified labs. "Purposes described in this section" is unclear. If this language allows certified labs to accept samples from consumers outside of Traceability, clear guidelines, should be established regarding what testing is permitted and how it should be recorded within Traceability.	4/4/2019
Email	Luke Hunter/Harmony Farms	WAC 314-55-102(1)(a)(iii)	Clarification	It is fantastic that other contributing cannabinoids to the psychoactive experience in cannabis are being recognized, we believe that this is a positive for the industry moving forward. I believe that this section should be elaborated on to include more examples than just Delta-8, and the term "psychoactive cannabis derivative" to be defined clearly in this rule.	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Clarification	Psychoactive/derivative/scientific language - define	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Clarification	Mycotoxins don't need to be referenced	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Clarification	Limits of acceptable consumption (define)	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(1)(a)(iii)	Compound identification	It would be impossible for the certified lab to know if these compounds were added, or even know what to test for (e.g., delta 8). This rule seems difficult to impossible to enforce. Compounds that are required to be tested should be specified.	4/4/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Cost	Consideration is being given to small businesses related to heavy metals testing	4/9/2019

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Comments Received re WSR 18-17-041 (Filed August 2018)

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April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Cost	Use current resources to test for integrity	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Proficiency testing	Defensible data	4/9/2019
April 9 Live Comment	Jeff/Capital Analysis	WAC 314-55-102	Dry weight rules	Fix the discrepancy of dry weight rules. Micro and mico not strong enough. Other molds are a concern. Terpenes and cannabinoids need to be in traceability. Should be doing end point testing. What are the limits from a data conception? Need to be able to do R&D	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Dry weight rules	Discrepancy between dry weight corrections (as received or prior?)	4/9/2019
Email	Green Grower Labs	N/A	Emergency rules = NO	Hello, We would like to address a few of the recent statements made during the "Listen and Learn" forum, 8/22/19. In the final 30 minutes of the forum, a proposal was made by a participant to immediately implement testing of pesticides and heavy metals, via an emergency rule. We respectfully submit that any such emergency measure would be hasty and ill-advised as the proposed implementation at this time has not been properly vetted. As stated during the start of the meeting, currently no labs in the state of Washington are equipped with and have verified methods to perform testing of all required pesticides as does the Dept of Ag. The Dept of Ag indicates the need for two pieces of equipment, an LCMSMS and a GCMSMS, each costing hundreds of thousands of dollars. The only lab in the state to attempt this was represented by a participant. It was indicated their lab purchased this second piece of equipment (GCMSMS) and after 4 months, it is still not operational. Thus, even though a few labs currently have one piece equipment (LCMSMS), none are currently able to perform the full spectrum of pesticide testing using both GCMSMS and LCMSMS as does the Dept of Ag. As such, any emergency actions at this point would clearly require a <i>sub sponte</i> reduction in the current list of tested pesticides without any scientific reasoning regarding why such a change is warranted. Such a change, therefore, appears as an attempt by a vocal few, to pre-empt the passing of testing oversight to the Department of Ecology, and the developing scientific committee which has stated an intent to standardize all future testing. Thus, this calls into question any motivation by this vocal few at the eleventh hour to make such a dramatic change. Further, this has clear negative repercussions to the market and tax base as a whole as this would cause a severe bottleneck in getting product to market. Our lab uses 3 chromatographers to keep up with our QA potency testing and turnaround times. All the current labs that can perform partial pesticide testing with only LCMSMS, have one unit, and could not possibly process the volume of samples needed to compensate for taking at least 2/3 of the current labs out of the market to complete QA testing. Never mind the couple labs that can currently perform heavy metals. I predict the backlog of QA turnaround times would be several weeks instead of days. Please continue to be thoughtful and methodical in your evaluation of how testing is implemented now, and in the future as based by clear scientific reasoning with proper vetting, and do not let any unsupported assertions lead you astray. Green Grower Labs 124 E. Rowan Ave (509) 981-2266	8/23/2019
April 9 Live Comment	Jed Haney/Lab Guild	WAC 314-55-102	Emergency rules = NO	Don't like emergency rule without discussion. DOH language is substandard. All pesticide testing should be equal across the board	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Emergency rules = NO	No emergency rule	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Emergency rules = YES	Emergency rule for heavy metals needed!	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	End product testing	Final packaged product is what is tested	4/9/2019
April 9 Live Comment	Amber/Medicine Creek Analytics	WAC 314-55-101	End product testing	Sample finished product, based on intermediate testing. Contamination can show up in packaging. Functioning traceability system needed.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	End product testing	End point testing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	End product testing	Back-up labeling with test - emergency rule	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	End product testing	Honor system/random finished product testing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Enforcement	Strong consequences for sampling if non-representative sample is provided	4/9/2019
Email	Julie Kowalski	N/A	Enforcement	Consequences of pesticide failures should be severe enough to encourage growers and processors to do a significant testing. This is how food safety is structured and why food companies have some of the best and most sophisticated testing. They can't afford to fail. An example would be increased required testing if you fail. After showing clean products, testing can be reduced.	8/22/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Fail samples = YES	Like the ability of labs to exercise discretion to fail samples.	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-1025(7)	Proficiency testing	This should also be applied to pesticides based on the Smith et al. report showing 78% false negatives on pesticide testing (B.C. Smith, P. Lessard, and R. Pearson, <i>Cannabis Science and Technology</i> 2(1), 48-53 (2019)).	4/4/2019

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Email	Luke Hunter/Harmony Farms	WAC 314-55-102(1)(b)(ii)	Foreign Matter Screening	Foreign matter screening: I believe that this section doesn't flow very well and I am curious as to why any seeds would be aloud in product. I have worked with adjudicative cases where licensees have received AVN's over having seeds in their product. The reasoning for the AVN was a non-industry member could take seeds from the product plant them and grow their own cannabis. It seems after making this determination to take enforcement action the rules should reflect a complete inability to have <u>any</u> seeds in useable cannabis.	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Functioning traceability	Traceability - functioning	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Functioning traceability	System is there; just needs to be enforced more stringently	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Packaging and Labeling	Harvest date on label/retest date on label	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Harvest testing	Harvest testing for flower; concentrates - pesticides, heavy metals	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Harvest testing	Harvest level testing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Harvest testing	Harvest size for testing	4/9/2019
April 9 Live Comment	Crystal Oliver/WSIA	WAC 314-55-101	Harvest testing	Farmers can't afford another increase. This should be written to not impact. Harvest testing, yes. Last change cost the farmers 50% more. Workgroup should include farmers. No harvest date. We worked to have it removed. Works against outside growers.	4/9/2019
April 9 Live Comment	Shawn DeNae	WC 314-55-102	Heavy metal screening = YES Pesticide screening = YES Emergency rules = YES	Making products better available for patients. Need emergency rule for pesticides and heavy metal testing. Lift the THC limits for patients. Let the doctors and pts sort it. Lift limit on packaging. ¼ lb limit. Ingredients need to be listed. Terpenes, etc.	4/9/2019
Email	Matt Heist/Green Grower Labs	None provided, but comments speak generally to WAC 314-55-102	Heavy metal screening	It would also be helpful to get some background regarding the impetus of heavy metals testing. Is there any data regarding failure rates in previous heavy metal testing as performed for past medical samples? Such data would be informative as to whether such testing, and the costs associated therewith, are in the interest of public health.	4/10/2019
Email	Crystal Oliver/WSIA	None provided, but comments speak generally to WAC 314-55-102	Heavy metal screening = NO Pesticide screening = NO	We DO NOT support lot level testing for pesticides or heavy metals. In Colorado some producers in Denver have discovered that Denver's drinking water contains some heavy metals at levels that exceed federal standards for safe drinking water. I am unsure how much testing for heavy metals in drinking water have been done throughout Washington State but I suspect we may encounter similar issues here which creates additional concerns for the WSLCB when you are attempting to hold cannabis to a standard that drinking water doesn't even meet.	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Homogenization concentrate baths	Homogenization concentrate baths- reduces economic impact	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Increase THC limit for patients	Lift THC limits for patients	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Increase THC limit for patients	Increase amount of product patients can purchase	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Ingested vs. inhaled	Ingested vs. inhaled pathways	4/9/2019

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Email	Marilyn Olson	N/A	Lab cert schedule PT testing Reference testing End product testing	<p>Thank you for the work session yesterday, Cannabis Quality Assurance Testing Rules work session. It is a step in the right direction but so much more needs to be discussed and remedied. At times it feels as though the goal of the WSLCB is to eliminate cannabis businesses rather than work through the issues.</p> <p>Below are a few points i would like to have noted in an effort to move to both preserve public safety and allow I502 businesses to stay profitable.</p> <ul style="list-style-type: none"> • Laboratory inspection/certification schedule- The annual certification/inspection requirement is excessive in comparison to other analytical laboratory's. Environmental and medical laboratory requirement (Usually every 3 years or upon issue) • The Inspection/certification institutions should be within the state or at least the trips from another state should be limited (perhaps conducting 3-4 audits while in Washington rather than 1) This year our cost was over \$8,000 for visit from RJ Lee out of PA. As well, 2 proficiency testing rounds per year brings us to over \$12,000 in additional annual running costs. Most analytical laboratory's perform proficiency's once a year after passing 3 rounds. Cannabis Laboratory requirements should not be more stringent. • Reference testing should ALWAYS be allowed. This assures laboratory's the ability to utilize another lab if they have an equipment issue, need to shutdown instrument for maintenance ect. This is a normal practice within laboratory's in other fields of testing including medical testing. • Prior to adding analysis an impact study should be done as well as full disclosure on how many samples will be utilizing this additional test. The addition of pesticides is easily over a million dollar investment while metals/ventilation/extraction requirements easily \$250,000. Testing per farm could benefit the growers following the rules (less testing) while costing the farms not following the requirements more money on testing. • To protect consumers, final products especially edibles should be tested for microbiological hazards (ENTC, Salmonella & E.Coli at least) <p>We are happy to work with you and other cannabis businesses to ensure the stability of the industry as well as support a safe product for consumers.</p>	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Cost	Lack of competition among labs	4/9/2019
Email	Alyse Honnold	WAC 314-55-101	Lighting	To assure the accuracy of the test for when it reaches the consumer, the retail stores should not be allowed to keep flower under bright lights, as it is a known fact that light degrades marijuana potency. WAC 314-55-01 (c) If producer/processors are required to maintain lots from which samples are taken in a low-light, cool location	8/22/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Limits on THC	Limits on THC & amounts for patients	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	LIMS	LIMS needs to be mandatory	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size	Split into four pieces; THC @4.0	4/9/2019
Email	John Kingsbury	None provided, but comments speak generally to WAC 314-55-101	Lot size = DOH determines	Lot size. Along with the idea of checking with DOH about product claimed to "meet the needs of patients", lot size changes regarding product that "meets the needs of patients" should be discussed with DOH. It may be that this would be a good time for DOH to reconsider their testing lot sizes. That is definitely a discussion that LCB and DOH should have during this process.	4/11/2019
Email	Matt Heist/Green Grower Labs	None provided, but comments speak generally to WAC 314-55-101	Lot size increase = NO	Regarding the proposal to increase lot size, the proposal is in direct contradiction to each of the other points regarding increased testing for public health safety, e.g. pesticides and heavy metals. Such an increase in lot size has to [the] potential to increase testing variance on an order of magnitude.	4/10/2019
April 9 Live Comment	Dani/GOAT Lab	WAC 314-55-101	Lot size increase = NO	If you take the 5# lots and increase to 10# lots, will cut revenue in half for labs. Equipment very expensive – already a low profit margin. Bring in in increments. Cost per gram. Be mindful of eco impact on vendors. High cost for labs to do test	4/9/2019
April 9 Live Comment	Jeff/Capital Analysis	WAC 314-55-101	Lot size increase = NO	Chain of custody lacking to verifying batch. Without homogenization, the variation is high. Increase in lot sizes will increase the problems we have. Variations in pesticides, etc. Use data driven policy. Do testing on several batches to get a range. Normalized report range. Will submit comments in writing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = NO	10lb lot will cut lab revenue in half; high cost of us to do the test.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = NO	Increase lot size will make it worse	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = NO	Dislike lot size increase	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = NO	Greater impact on small businesses; farmers cannot afford another increase	4/9/2019

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April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = NO	Do not increase lot size for potency	4/9/2019
April 9 Live Comment	Camilla Paine	WAC 314-55-101	Lot size increase = NO	Lab discretion to fail samples, good. No on lot size increase. Lowering percent could increase danger. 10 grams/10# lot	4/9/2019
April 9 Live Comment	Kyle Capizzi	WAC 314-55-101	Lot size increase = NO Advisory committee	Overall commentary written. Changing sample size increases burden on all. Testing rules should be looked at by panel of SMEs. 3 rd party sampling will help. Listed possibilities. Sample size. Scale based on lots. Don't mix English and metric. Refer to other states for info.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = NO Harvest testing	Not lot, but harvest testing	4/9/2019
April 9 Live Comment	Jed Haney/Lab Guild	WAC 314-55-101	Lot size increase = NO Sampling protocol accuracy Functioning traceability	Lot size, no. connected to everything else. Lab traceability system should be included. Harvest date should be on label. Retest within a certain time, if not sold. Edibles not shelf stable – 90 day retest. Sched of testing x per x lot connected to percent. 3 rd party on failed test. Chain of custody.	4/9/2019
Email/ Doc	Shawn Denae	N/A	Lot Size Increase = YES	Increase the lot/harvest sizes for both Quality Assurance and P/HM to reduce the costs to producers. a. 1 P/HM test per harvest of a continuous area on the same date no matter how many strains. (3 gram + a \$350 test – currently we have to test 4 to 8 strains each month and send in 3g/every 3lb. when the lab only needs .5g!) i. 3g/harvest allows for 2g to be in reserve for potential retesting mitigation action. b. QA testing done by strain by same day harvest no matter the weight harvested. i. This will allow sending the samples at 1 time (currently has to be done in 2 steps) c. Do this on an honor system (suggestions of having the lab pick samples are too cumbersome and would add costs) then back it up with random testing in addition to complaint testing to keep the industry honest. This is already a rule!	6/21/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = YES	Like the stronger language added regarding lot size	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = YES	Increase in lot size ok, but look at this closely.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = YES	Increase QA sample size to 10 - at least 10grams per 10lb lot	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Lot size increase = YES	Lot increase should go farther (farmers)	4/9/2019
Email	Crystal Oliver/WSIA	None provided, but comments speak generally to WAC 314-55-101	Lot size increase = YES Lot size by strain/harvest Pesticide screening = NO Heavy metal screening = NO	We would like to see lot size further increased, or better yet see farmers given more flexibility in defining their own lot size based on strain & harvest when it comes to Cannabinoid Concentration testing. (We DO NOT support level testing for pesticides or heavy metals) We could easily increase sample size to address any of the concerns expressed by labs with regard to lot size increases.	4/10/2019
Email	Fred Brader/Orgrow LLC	None provided, but comments speak generally to WAC 314-55-101	Lot size increase = YES Equivalent total weight harvested	On lot sizes for testing. It is being proposed to increase the lot from 5 lbs to 10 lbs. I would suggest it stay 10 lbs. OR the equivalent of the total weight harvested of any given strain on the same day. For instance, a grower may plant 200 plants indoor or possibly 100 plants outdoor and grow them identically with birth dates on the same day and harvest dates on the same day. All parts of this harvest should be the same and if samples are taken by quadrant as required then the test would be representative of the entire harvest of a specific strain. Requiring a test for every 10 lbs. causes additional costs to the producer and down the road at the retailer, it causes inventory traceability problems when switching between test lots of the same exact material. When formulating rules and laws, please ask yourself if you would support legislation that would treat a Cannabis producer differently than say a winery. Do we require a winery to test every 5 or 10 gallons of wine when it is made in a 1000 gallon tank?	4/15/2019
Email	James Dusek/James Downtown CC	None provided, but comments speak generally to WAC 314-55-101	Lot size increase= YES	<u>Lots should be a running lot meaning you harvest plants until the 10lbs (I would recommend 20 lbs) are reached.</u> We don't harvest 10lbs at a time as we are a perpetual grow and harvest small lots from the same room with the same growing conditions weekly or biweekly. This keeps the product fresh to the customers.	4/9/2019
Email	John Kingsbury	N/A	Lot sizes	<ul style="list-style-type: none"> Eliminating lot/per strain, in exchange for lot/regardless of strain mix makes good sense so long as those strains were grown in the same space. If there is an opposing opinion to that, I would like to hear it. Testing per garden space. Shawn De Nae advocated testing per garden space as (I understood) a lot size. The reason being that pesticides would be applied evenly within that area. We disagree with that. Here is our suggestion. Making a lot size of mixed strains a testing lot would be OK in concept but we do not believe pesticide application would likely be uniform across a common area. There would need to be a maximum square area for that sample, even if that created more than one sampling area within a large common gardening area. <p>Some solution along these lines could provide significant testing cost mitigation while providing some assurance of a check for representative testing.</p>	8/23/2019

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Email	J. Burns/Treeline Analytics	WAC 314-55-1025(9)	Management of PT samples	This is not always possible based on the format, matrix and sample size of PT samples provided by vendors. Language should be adjusted to indicate the lab must follow SOP as much as possible, and when not in conflict with guidance of PT provider.	4/4/2019
August 22 Live Comment	Douglas Duncan	N/A	Mitigation	1) Test soil and water for heavy metals rather than testing the plant. 2) Remove Captain, cyfluthrin, cypermethrin, Chlorfenapyr, PCNB (quintozone); so that only a LC-MS/MS is needed.	8/22/2019
August 22 Live Comment	Larry Ward	N/A	Mitigation	1) Mentioned that WA is the least expensive state to test in. 2) Wants consumers to pay ~\$0.05 more a gram for lab testing 3) Does not want increased lot sizes (WA 5)- CA 50, OR 15 3) How much quality does WA want from labs? 4) Believes in necessity of testing - 25% of samples failing	8/22/2019
August 22 Live Comment	Crystal Oliver	N/A	Mitigation	1) Wants a lot increase to 10lb (for tier 1&2) 2) 1 Test, 1 Strain, 1 Harvest 3) Wants higher action limits for pyrethrins 4) want to be able to tell farms what pesticides to use.	8/22/2019
August 22 Live Comment	Shaun DeNae	N/A	Mitigation	1) 1 Test, 1 Strain, 1 Harvest 2) wants end product testing (secret shopper) 3) wants a lot size increase to 10lb or 15lb 4) Voluntary testing due to expense - Label 5) Concerned mostly about concentrates testing.	8/22/2019
August 22 Live Comment	Amber Wise	N/A	Mitigation	1) Shorter pesticide list for now and periodically add more pesticides to the list 2) Allow 6 moths to validate a method.. 3) LEAF is broken.. 4) Retail should bear the cost of additional tests.. 5) Current testing framework allows for many opportunities fro adulteration before reaches consumer.. 6) Are HMs in both the packaging and the product? 7) Test End Product (secret shopper) 8) Delineated by crop, location and time	8/22/2019
August 22 Live Comment	Nick Mosely	N/A	Mitigation	1) WSDA MOU is underutilized 2) Shorter pesticide list 3) Focus on concentrate testing because during the production process other pesticides could have been used.	8/22/2019
August 22 Live Comment	Jeff Doughty	N/A	Mitigation	1) Consumers should pay for testing through a retail tax (Douglas Duncan's Comment) 2) Labs need to charge more money for testing.	8/22/2019
August 22 Live Comment	Jim McCrae	N/A	Mitigation	1) Wants Yeast and Mold back on testing list 2) Piperonyl Butoxide (PBO and Pyrethrins 3) Large farms benefit more from lot size increases (doest want increase) 4) Sampling is easy to be gamed in current system 5) Always a balance between price and consumer safety	8/22/2019
August 22 Live Comment	Don Skakie	N/A	Mitigation	1) Wants safe Product 2) Wants limits to be based of product that is lit on fire and smoked rather than eaten (weed is not a typical food group item) 3) Find a balance for who pays for testing and what tests are done	8/22/2019
August 22 Live Comment	Alan Boner	N/A	Mitigation	1) Small lot sizes just make money for labs 2) focus on concentrate testing because the production process could have added pesticides 3) Suggested a distributor model like CA	8/22/2019
August 22 Live Comment	Shaun DeNae	N/A	Mitigation	1) Too many significant digits on cannabinoids 2) Ranges for ptency labeling 3) Samples are not representative of the lot	8/22/2019
August 22 Live Comment	Lana Kruger	N/A	Mitigation	1) Wants Certified Organic 2) does like the idea of potency ranges 3) Educate consumers on potency and cannabinoids 4) Wants a lot size increase 5) 1 Test, 1 Strain, 1 Harvest 6) Quarterly Testing	8/22/2019
Flipchart	Listen and Learn attendees	N/A	Mitigation	Mitigation notes on flipchart *See Notes Hyperlink*	8/22/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Mold	Yeast and mold testing should be brought back	4/9/2019
Email	John Kingsbury	N/A	Mold	Testing for molds Jim MacRae offered a comment about restoring mold testing. I have no idea why that ever went away. There are some scary molds floating around. For health compromised people -geeze LCB.	8/23/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	More tests	Increase mycotoxin/other current tests	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	N/A	Science based/data driven decisions	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	N/A	Board should be capitalized	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	N/A	PT's in matrix, then decrease to one per year	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	N/A	Invitations to all licensees and labs	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	N/A	Highly repeatable testing	4/9/2019

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Email	Eric Clayton	N/A	N/A	Some additional notes: 1. Heavy metals are not evenly distributed within a cannabis plant. Parts of plant used to create concentrates can affect levels of contaminants. 2. Contaminants can be introduced via additional chemicals and products used so initial testing of plant may be clean, but then everything used in making the final product may fail. a. Manufacturers may source same material from a different source which can introduce contaminants unbeknownst to them	8/22/2019
Email	Eric Clayton	N/A	N/A	Eric Clayton (chemist from EcoChem (we do data validation), what mitigation is currently used or planned to be enacted for verifying the laboratories are providing quality data to regulatory agencies? Are state chemists reviewing lab practices and generated data? Laboratories are just as prone to providing questionable data due to poor handling, sampling, training as producers.	8/22/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Packaging and labeling	No harvest date on package (farmers)	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Packaging and Labeling	List ingredients on product labels	4/9/2019
April 9 Live Comment	Crystal Oliver/WSIA	WAC 314-55-102	Pesticide screening = NO	Concerns on pesticides even though farmers are following directions because they fail anyway. Naturally occurring pesticides? 2 separate standards for edibles and other. Concerned about lack of competition. Harvest level testing.	4/9/2019
Email	Ben DeChenne/Olympic Mountain Farm	None provided, but comments speak generally to WAC 314-55-102	Pesticide screening = NO	Please don't add pesticide screening. The industry is already tanked and we are all struggling to even keep the power on. Crazy how many people I knew when this started who have had to file bankruptcy over marijuana.	3/21/2019
Email	James Dusek/James Downtown CC	None provided, but comments speak generally to WAC 314-55-102	Pesticide screening = NO	We are a small Tier 2 producer processor and I would like to comment that the proposed changes is <u>extremely harmful to producers. It's especially damaging to small producers</u> such as my company. <u>The pesticide testing should be done by the Dept of Agriculture</u> as is currently in the rules but order them to process tests for at least 500 products per month from various manufacturers not just products that are reported to them. Every manufacturer having at least 1 test per quarter. <u>It's our job to follow the rules not regulate ourselves!</u> Pesticide testing every 10 lb lot is extremely redundant, costly and has a guilty till proven innocent policy to it. There are extremely too many tests currently. If anything the micro, pesticide and heavy metals testing should be random and not be required per lot. All this does is enrich the labs.	4/9/2019
Email	James Dusek/James Downtown CC	None provided, but comments speak generally to WAC 314-55-102	Pesticide screening = NO Heavy metals screening = NO	<u>Pesticides:</u> Extremely damaging to small craft producers. Testing every lot is crazy, costly and will put further strain on the producers that are barely hanging on. Dept of Ag should be testing 500 to 1000 products a month. <u>Heavy Metals:</u> Extremely damaging to small producers. Dept of Ag should test random samples per month.	4/9/2019
Email	Toni Nersesian/Palouse Farms	None provided, but comments speak generally to WAC 314-55-102	Pesticide screening = YES Random testing Lot size increase = YES Heavy metals testing = NO	Good day. We are a Tier One P/P. 1. Pesticide testing I do NOT want any consumer to purchase cannabis that has illegal pesticides in their product. I request you continue to INCREASE your funding for random testing, off the store shelves. Bad players know how to avoid bad test results. Random testing and serious fines will do more to quickly clean up our industry than mandatory testing for everyone 2. Lot sizes – 15 lbs. Even as a Tier One, larger lots would have helped us. If a Tier One can combine harvests of the same lot, they could achieve larger weights. 3. Heavy Metals testing This seems to be a test promoted by the lab(s). Does not seem to be a serious problem. You could require annual water tests for metals.	4/15/2019
Email	Alex Kaulins	None provided, but comments speak generally to WAC 314-55-102	Pesticide screening= YES Heavy metal screening = YES Increased cost Random testing Terpenes = NO	Hi guys. I'm a 502 producer/processor and just received your email with drafted rule changes for QA Testing. I have some feedback for you to consider. While I strongly support the added requirement of pesticide and heavy metal testing by licensees, you guys aren't in touch with the reality of how expensive these tests are. 1. First of all, as of today, there are zero labs approved to test for heavy metals. These policies for heavy metals should not go into effect until there are at least two approved labs that way theres some price competition to keep our testing costs down. For clarity, a heavy metal and pesticide test together cost >\$300 whereas a potency/micro/myco/residual test is currently ~\$100. So to be clear, your new rules may double the flower lot size to 10 pounds, but quadruple our testing costs to >\$400 per lot. 2. The WSLCB would be much better off conducting random pesticide and heavy metals tests of all the top 200 processors in the state. You honestly should purchase their products in stores and submit it for testing yourselves. Putting testing in the hands of	3/21/2019

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				processors is simply a mistake. The only way to keep processors honest is to test product that they didn't know was going to be tested. It's that simple. 3. I don't see any reason to force processors to pay for terpene tests if they choose to infuse additional terpenes. A molecule, is a molecule, is a molecule. Google it. It's what people in chemistry say and there's a reason for it. A myrcene molecule is the exact same whether it was derived from a mango or a cannabis plant. You should not be creating extra testing (and therefore cost) requirements on our low-margin industry without valid scientific reasoning, and your terpene testing rules just don't make sense. I'd love to talk more about this with anyone who cares.	
Email	Greg Moore	N/A	Pesticide Screening = No	Require all cannabis to be organic. Keep it small. Otherwise it'll turn into big tobacco. We can do this right....don't let it become some skeezy industrial manufactured crap.....	6/20/2019
Email	Dan Rasmussen	N/A	Pesticide Screening = YES	Please do share my thoughts around as it seems sensible not to burden Farms further especially since it will create more deception among an already deceptive group.(pesticide rules in place yet there are still many failing for pesticides). I can't tell you how many times I have been told we don't use pesticides from multiple producers in the state and then we make concentrates and there they are. (Shocker) I no longer look for extract material to purchase because of this reason.	7/25/2019
Email	Miguel Mulholland	N/A	Pesticide Screening = Yes Heavy Metals = No	If testing for the multiple components of molds to metals is required and the results are mandatory to be on the label, the consumer will still smoke it, it just gives them a chance to know what's in their flower. Testing for all consumption, medical vs. recreational should be equally mandatory.	8/22/2019
Email	Joe Rammell	N/A	Pesticide Screening = Yes Lot Size Increase = No	<p>1. The cost of P and M testing is not as bad as people think. Confidence has been doing pesticide tests at little or no cost if you do the full panel with terps. Also they just added heavy metals, so that should bring competition into that testing as well.</p> <p>2. I have seen some discussion that after a farm demonstrates a clean record for P and M tests for some period of time, that maybe it could be a random test a once a quarter or something. Good idea. The labs will probably not support this because it means less tests. This would really help the small growers.</p> <p>3. There are ways for processors to remove pesticides from their concentrates. Some are doing it now, and if testing is demanded, everybody will.</p> <p>4. If the lab is going to do terpene testing, there needs to be a standard. Right now people shop the numbers, because it's not mandatory.</p> <p>5. If we make lot sizes bigger, it favors the larger farms. Most small farms rarely have more than 5 lbs of a particular strain. Just saying.</p> <p>6. Lot sizes need to be the same for medical.</p> <p>7. And here's the tough one. If you let the farms self-sample, it doesn't matter what you do, because growers will game the system. They're doing it now. For example, if a farm has a particularly good lab report off one lot, he can set aside enough to send as samples for every new harvest. In fact he could send an entirely different strain, and the lab probably wouldn't notice.</p> <p>Solution. Last year I was working with Confidence to do a voluntary harvest (not strain) pesticide test. When their driver came to do the pick-up, he supervised the taking of the samples to make sure they were valid. It means that the labs would have to offer this service, or authorize a transit company to do it.</p> <p>We did a test run recently where we needed to send 5 samples and he watched us do it. If you have the paperwork ready, and the containers, and the lots laid out, it only took him an extra 20 minutes to take all the samples. I guess what I'm saying is we have to stop self-sampling.</p>	8/21/2019
August 22 Live Comment	Larry Ward	N/A	Phase In Comment	1) Wants 6 month phase in 2) Wants to test for pesticides before heavy metals 3) Only test soil and water for heavy metals 4) CA is a mess!	8/22/2019
August 22 Live Comment	Ben Hart	N/A	Phase In Comment	1) SCIEEX released an app note that said a single LC-MS/MS run could run LCB list in one analysis 2) 7 pesticides are problematic 3) Question is always cost v. safety 4) Test the soil & water for heavy metals 5) Don't increase lot sizes 6) Communication is critical at rollout 7) Cost less than \$220 for pesticide and Heavy metal testing. 8) Phase in both over 3 month period	8/22/2019
August 22 Live Comment	Amber Wise	N/A	Phase in comment	1) Health and beauty products heavy metals is not important 2) Noted that heavy metal failure rate is about 2% 3) Trust in labs comes from accreditation 4) Concentrates fail the most for heavy metals 5) need to test cartridges and oil separately and together to determine the root of the heavy metal failures.	8/22/2019
August 22 Live Comment	Shaun DeNae	N/A	Phase In Comment	1) Start with concentrates HM & P good for 1 year 2) Test soil and water for heavy metals 3) Batch sizes for concentrates are too large	8/22/2019
August 22 Live Comment	Lana Kruger	N/A	Phase In Comment	Soil and water companies should test their soil and water for heavy metals since that is where producers are buying their soil.	8/22/2019
August 22 Live Comment	Nick Mosely	N/A	Phase In Comment	1) End product testing (secret shopper) 2) Potency Ranges are a great idea 3) lot size increase for tier 1&2.	8/22/2019

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August 22 Live Comment	Jim McCrae	N/A	Phase In Comment	1) Phase in is not necessary because some labs are already ready and should be rewarded 2) Pesticides are important, but not at the cost of heavy metals and patients are at greatest risk testing 3) Heavy users 4) Wants more end product 5) Testing may attract more patients to the legal Market 6) Use WSDA MOU to sample and target tests 7) Bring back secret shoppers ranges are a great idea 8) Potency	8/22/2019
August 22 Live Comment	Douglas Duncan	N/A	Phase In Comment	1) Voluntary testing with labeling about test status 2) Soil and water tests for heavy metals good for 1 year 3) Potency ranges are a great idea	8/22/2019
August 22 Live Comment	Jeff Doughty	N/A	Phase in Comment	1) Section for tested product at retail 2) Wants a hard date for rollout 3) Wants stricter enforcement of current rules 4) Variable lot sizes 5) More products should get mycotoxins 6) Potency ranges are a great idea 7) End product testing makes most sense (Secret Shopper)	8/22/2019
August 22 Live Comment	Alan Boner	N/A	Phase In Comment	1) Rollout immediately 2) Additional testing could drive diversion 3) Enforcement on illicit markets are critical	8/22/2019
August 22 Live Comment	Mike Schmitt	N/A	Phase In Comment	Good job	8/22/2019
August 22 Live Comment	Shaun Denaе	N/A	Phase In Comment	1) Wants emergency rules 2) there are dangerous products out there 3) All MJ product should be clean	8/22/2019
August 22 Live Comment	Eric Layton	N/A	Phase In Comment	1) Lab data should be reviewed 2) Labs are not reliable 3) Heavy metals distribution is not uniform in plant	8/22/2019
August 22 Live Comment	Kyle Capizzi	N/A	Phase In Comment	1) Sudy, observe, and adjust while phasing in 2) potecny should be cannabinoid content instead 3) should look to find root cause for detected pesticide and heavy metals.	8/22/2019
Flip Chart	Listen and Learn Attendees	N/A	Phase in Flip Chart	Notes made on Flipchart *See Notes Hyperlink*	8/22/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Phase in rules	Bring in rules incrementally	4/9/2019
April 9 Live Comment	Camilla Paine	WAC 314-55-102	Phase in rules	Like consideration to small producers and processors. Rec – roll out time 6 mo to a year. Labs choosing 502 testing that they do. Harvest level testing in flower. Concentrations should have more testing. Testing on inhaled rather than ingested.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Phase in rules	Roll-out timeline - 6 months/1 year	4/9/2019
Email	James Dusek/James Downtown CC	None provided, but comments speak generally to WAC 314-55-102	Potency	Allow the flower to be tested after the flower is dried at the lab for moisture testing. This is a true reading for potency	4/9/2019
April 9 Live Comment	Thomas Jay	314-55-102	Potency testing = NO Pesticide screening = YES Heavy metals screening = YES Terpenes = NO	PT: potency analysis is marketing. Not a patient safety issue. Potency is random – 10-20% variation. 100% testing for pesticide. Save the testing for heavy metals rather than terpenes.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Product Cost	Consider cost per gram	4/9/2019
April 9 Live Comment	Camilla Paine	WAC 314-55-1025	Proficiency testing	PT's should be a matrix. After 3 good tests, should go to annual.	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Proficiency testing	Proficiency tests in matrix, blind (two attendees offered this)	4/9/2019
April 9 Live Comment	Amber/Medicine Creek Analytics	WAC 314-55-1025	Proficiency testing	Proficiency tests should be done in matrix. And should be blind tests. WSDA contract-what is actually happening with that and how is it factoring in. Need very clear Recall process with enforcement	4/9/2019
Email	Matt Heist/Green Grower Labs	WAC 314-55-1025	Proficiency testing	We agree with the idea stated during the meeting concerning PT testing dropping to once a year after 3 consecutive passes.	4/10/2019

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email	John Kingsbury	N/A	Pyrethrin failure	<p>Crystal Oliver of the Sungrowers advocated raising the action levels for pesticides. Memory is that she was advocating for an increased tolerance for pyrethrin, specifically. Our group is firmly opposed to this for multiple reasons. I will name one. First, the neglect of the DOH Compliant standard by LCB means that the recreational supply of cannabis may continue to be the 'medical' supply for the 38% to 40% of qualified patients who are choosing to access the regulated market. Changing the recreational standard means changing the medical standard, in reality.</p> <p>Ms. Oliver stated that the failure rate of her members was frequent enough that, maintaining the current standard meant that they were losing crops. I would like to assert that the best solution for her members to stop losing crops to pesticide failures would be to use fewer pesticides. Conversely, the worst solution to losing crops to pesticide contamination would be to make consumers pay the price with their health.</p> <p>I would also like to point out that nearly every member of the Sungrowers claims to grow 'pesticide-free'. So if that is the case, I cannot imagine why there is an issue.</p>	8/23/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	R&D testing	Need to be able to do R&D testing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Recall	Recall procedure and enforcement	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Recall	Strengthen recall process	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(5)	Referencing	The purpose(s) of reference samples should be listed as well as clearly stating how these samples should be handled in Traceability. Rules should be adopted to allow the transfer of samples between certified labs for additional scientific verification data. This type of practice is standard for scientific research and would allow for more accurate information and assist in protocol development and validation.	4/4/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(4)c	Remediation	The language indicates that only pesticides and residual solvents will be allowed for remediation. Microbiology remediation should be included. Methods of remediation should be defined, validated and audited. Specific guidelines should be specified for the disclosure of remediation to retailers or consumers.	4/4/2019
Email	Luke Hunter/Harmony Farms	WAC 314-55-102(4)c(i)	Remediation	This section is almost perfect although I believe adding language to define that introducing a "toxic or harmful substance" that would still reside in the end product. We are still early in the scientific development when it comes to remediation on cannabis and it would be a hindrance if we could not use a toxic substance such as chloroform (that is incredibly volatile) to remediate a harmful pesticide from the end product the consumer ingests. I would think something along the lines of "Producer and processor may remediate failed lots, batches, or both so long as the remediation method does not impart any toxic or harmful substance to <u>the end product(s) of:</u> useable marijuana, marijuana concentrates, or marijuana-infused product".	4/10/2019
Email	Dan Rasmussen	N/A	Retail Absorb Cost	<p>It is time some of the burden be put on retailers to help cover costs of something.</p> <p>We producer/processors do all of the work involved to get products to retailers including pay for testing for microbial and potency at the very least.</p> <p>Meanwhile the retail stores sit back and dictate who lives or dies and sets pricing (way to low) chasing the bottom thinking to sell more for less is in any way a good thing for anybody.</p> <p>Proposal is to have them pay to test each and every farm at least once every 6 months at random. Testing is down to 70 dollars at this point so not a huge financial burden, seeing how they pay for nothing else this seems fair.</p> <p>Next many stores are owned by Farms indirectly (surprise) so there needs to be an independent group who has the public interest in mind who picks the random samples. You cannot have the rat guarding the cheese.</p> <p>Same goes for having producer processors doing the testing, there simply are too many ways a unscrupulous actor can fake the system.</p> <p>At retail after packaging there is no way for anyone to play games.</p>	7/23/2019
Email	Luke Hunter/Harmony Farms	WAC 314-55-102(4)(b)	Retesting	This section now requires the licensee to request retesting, then "the board may authorize the requested retest to validate a failed test result on a case-by-case basis". Inherently there are issues with this, first and foremost I foresee an appeal case for every time the board denies a request (there should be clear appeal language in this section of rule similar to other sections of 314-55). I additionally would recommend for an ability for the licensee to request a retest through the lab they are working with rather than reaching out for approval through the WSLCB. False positives are an inherent issue with testing the complex compounds found in cannabis, waiting on approval from the WSLCB for a retest would result in excessive pause between harvesting product and bringing it to market. Having the conversation facilitated between the licensee and the lab doesn't pose any threat to public health or safety and alleviates a large workload from the WSLCB. If the rules do stay consistent with the draft language, I would like to see a clear policy/procedure to be put into place for how the WSLCB will handle this interaction with expected timelines and who to reach out to.	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Retesting = YES	Like retesting process for false positives.	4/9/2019

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April 9 Live Comment	Flipchart Note	WAC 314-55-101	Retesting = YES	Clear policy/process for re-testing (what options do we have?)	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Retesting = YES	Quick turnaround for false positives (i.e. one quick re-test)	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Sample quality	Sample integrity	4/9/2019
April 9 Live Comment	Shawn DeNAe	WAC 314-55-101	Sampling protocol	Rep samples: 6 pt spread from top to bottom-should be allowed to test best bud. THC.00- don't like. Not specific amount but a series of ranges.	4/9/2019
Email	Luke Hunter/Harmony Farms	WAC 314-55-101(2)(c)	Sampling protocol	This section seems to prescribe a standardized manor of taking samples to assure their clean and not contaminated. I believe this section is overly prescriptive and it is in the best interest of the Producer/Processor to provide clean samples. I would like to see this section change to describe the intended outcome of taking samples such as: "Samples must be collected in a sanitary manor and must not receive contamination from an outside source to the sample as to maintain purity".	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Sampling protocol	Test the best bud	4/9/2019
April 9 Live Comment	Jim MacCrae/Straighline Analytics	WAC 314-55-101	Sampling protocol	Good for consumer safety and trust. Good stronger language. If you choose to put burden of cost on profit. Chain of custody issues. Strong consequences for non-rep sample. Make it simpler. Best means quality, not mold, etc. Cost benefit of this is at the core.	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-101	Sampling protocol	Due to the above concerns, it is impossible for labs to determine in a QA sample was collected improperly. Likewise, there is no process, either through request of documentation or history or enforcement that the lab can determine the quality of the sample.	4/4/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-101	Sampling protocol Lot size increase = NO	Sampling protocol is inaccurate. Specifically, Section 3b should be better defined, with the current vague language removed. The sampling of 4 grams from a 10lb lot will produce a QA sample that is statistically insignificant for the protection of the public. Due to analytical error, sampling error and natural variation of the cannabis plant, lot size should be reduced from the current 5lb limit, not increased or QA sample size increased.	4/4/2019
Email	Steven McCombs/MC2 Supply	None provided, but comments speak generally to WAC 314-55-101	Sampling protocol Sample by strain/ harvest	If the final rules uses the 'Honor System' for obtaining samples for testing then this is not a true random sampling systems. So why should the sample size be large? I request that the size lot from which samples are pulled from be by strain by a days harvest amount for all products except concentrates. Concentrates should be tested per 'Batch Ran or Processed' in the process.	4/9/2019
Email	Luke Hunter/Harmony Farms	WAC 314-55-101(2)(a)	Sampling protocol accuracy Random end product sampling	The current intention of this section seems to strive for a truly representative sample to represent the entire lot of cannabis. We believe that putting the responsibility on labs to check for adulterated samples is putting a unwarranted strain on a branch of this industry that is rather poorly regulated. I do not mean to put labs down as I believe that most labs are doing their best to operate under the intended regulation, although the WSLCB doesn't hold the same grasp over their business as other branches of this industry (producer/processor/retail). A lab that receives penalty resulting in their certification being revoked, is still able to open another business where the rest of the industry is not held to that same standard (we lose our license and we cannot get another license). Back to the point there isn't a driving force or incentive for a lab to report adulterated samples as this would result in Producer/Processor to stop utilizing them. I would offer that having randomized end product samples tested at the WSDA lab to test for congruency with advertised values would be a better means to assure that licensees are in compliance. To define "congruency" I am getting at a licensee that advertises that they are selling a product at "X" total cannabinoid value and the test results come in at something greater or less than the standard margin of error meaning there was adulteration of the original sample.	4/10/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Scale sampling	Scale the sampling - 2 - 3- grams per kilo	4/9/2019

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Email	Luke Hunter/Harmony Farms	WAC 314-55-101(3)(a)	Scaling or grading lots	This section is where the lot size is defined for testing samples. I believe the ultimate issue that we will face here is not the individual lot size but how a lab sample is bound to a lot for sale on market. To explain that statement currently when we harvest a room we may end up with 35lbs of flower to be available for market, this gives us 7 5lb lots that will all receive different potency numbers that can range on average around +/- 5%. We then have stores requesting to purchase from specific lots rather than buying a strain. This model is somewhat sustainable in a closed Washington market, although we are in an era where as a state we need to prepare for interstate commerce. The organization of selling multiple sub-sku's of the same parent sku (in this case just buying a strain of cannabis) at a larger scale becomes an unnecessary pain point when an average of several lots would be in fact a better representation of the THC/CBD percentage in the packaged product going to the consumer. This would lead to a possible solution similar to removing specific cannabinoid concentration and inputting a gradation such as, Grade A = >25%, Grade B = 25%-20%, Grade C = 19%-15%, Grade D = 14-10%, Grade E = <9% (these numbers are just an example not necessarily recommended). In this model the Producer/Processor would then take each lot that falls into a gradation and then combine them for sale. So for the sake of clarity a Producer/Processor harvests a crop of the same strain and they get 50lbs of useable cannabis from it this would result in 10 5lb lots, let's say that 8 of those lots fall into the "Grade B" standard above and 2 lots fall into the "Grade A" standard, for the sale of this product they would then combine all the Grade A product into one lot and all of the Grade B product into one lot. This results in 2 sub-sku's or "lots" to keep track of in traceability and for sale rather than 10. This is all from our perspective as an indoor farm taking this model to an outdoor farm where a harvest can consist of several hundred pounds of flower would greatly increase the need for combining similarly graded product. In the model described we have small batch testing (not hurting lab revenue), but globalizing and averaging the product after the fact, resulting in granular testing and better cannabinoid profile representation to the consumer.	4/10/2019
April 9 Live Comment	Shawn DeNae	WC 314-55-1025	Standardized testing	Need one list. Every agency has their list and LCB too. Need one list. Need harvest testing, but not so cumbersome – all to the lab at the same time. Honor system. Random at the finished product end. Need labeled "pest free" should be tested	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Standardized testing	One testing list	4/9/2019
Email/Feedback Doc	Cannabis Alliance	WAC 314-55-102(1)	Subcontracting	Does subcontracting need to end? This updated document suggests there is an end date (unspecified) when all labs would need to be accredited for all tests. If services are inadequate for demand and accreditation reasonable, the market should deliver sufficient laboratory capacity.	4/9/2019
Email	Pam Haley	n/a	Taxation Aromatherapy Required CBN Testing	Thank you for your diligent efforts in making rules for our emergent market. There are thousands of harmful pesticides not on the list of recommended pesticides test. How do we ensure other pesticides are not used? Why not make a list similar to the California Prop 65 of the harmful chemicals used in pesticides and test for those instead of name brand formulations. I recommend pesticide testing on all cannabis that the state of Washington is taxing. I humbly ask that the state of Washington lower the excise tax rate to 20% to allow for absorption of the extra pesticide, heavy metal and terpene testing expense. Aromatherapy has been in practice for several hundred years. During this time, we have learned that terpenes can cause a public safety concern if used improperly. I completed the certification course at Bastyr University just to learn more about cannabis, my end-goal and its effects in the products I make. We know lavender induces relaxation, just look at mainstream insomnia therapies. The terpene in lavender that causes relaxation is Linalool; this terpene is a prominent terpene in cannabis, especially the strains named, "Lavender". Another primary terpene to reduce insomnia is Myrcene and is prominent in 85% of cannabis strains. When consumers combine pharmaceutical drugs with cannabis, or even a long hard workday with the wrong strain, we cause a public safety concern by not require testing and labeling of terpenes. To understand this, it doesn't take a medical doctor, it takes an aroma therapist. Please require aromatherapy training for all MCCC's. Cannabinol (CBN) is the primary cannabinoid that reduces insomnia. In fact, anecdotal evidence shows CBN combined with Myrcene has caused significant "couch-lock". To avoid a serious public safety concern, please require testing for and labeling of CBN. CBN is a degradation of THC caused by oxygen, light, heat and time. As the product degrades the THC percentage will fall and the CBN percentage will rise. CBN is also a sign of how fresh the product is for consumption. Removing the Harvest Date, not requiring CBN nor terpene percentage sets up the consumer for an unpredictable experience. Not requiring every 15 pound lot of cannabis to be tested for pesticides sets up the consumer for unexpected health concerns. As a licensed producer/processor and creator of fine cannabis oils using CO2 extraction equipment, I humbly ask for the LCB to include my recommendations in the rule making process.	
Email	J. Burns/Treeline Analytics	WAC 314-55-102(1)(g)	Terpenes = NO	It would be impossible for the certified lab to know if terpenes were added or removed without being informed by the processor. Due [to] the high number of terpenes present in cannabis, a specific list of terpenes would need to be provided for testing. Different methods utilized by labs may have different abilities to measure terpenes. Based on this rule, any concentrate or distillate would require terpene testing since terpenes are removed.	4/4/2019

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Email	Luke Hunter/Harmony Farms	WAC 314-55-102(1)(g)(ii)	Terpenes = NO	This section I believe should be stricken from this set of rulemaking as a majority of cannabis end products have "removed terpenes". The term "terpene" is incredibly vast and lacks definition anywhere in rule, at the very minimum I believe there should be a definition of terpene somewhere in chapter 314-55. Useable flower in the curing process has terpenes that evaporate off of the drying flower, all extracts have terpenes stripped away from them in the process of extracting cannabinoids, and all marijuana infused edibles have added ingredients that contain terpenes. This section of rules would put the industry in a place where we would be required to get terpene testing performed on the majority of our products along with the other tests. Then the question is for what reward? In short my request is for the term "terpene" to be defined in WAC chapter 314-55 and to have (1)(g)(ii) to be stricken from this rule change.	4/4/2019
Email	Lindsay Short/Natural Extractions Inc.	WAC 314-55-102(1)(g)(ii)	Terpenes = NO	This is not a public health issue. There are no psychoactive ingredients in terpenes. Terpenes are a natural occurring ingredient in more than just cannabis (lemons, oranges, lavender, etc. all have terpenes in them; none require any terpene testing). Additionally almost all extraction methods remove at least some, if not all terpenes in their process which means the LCB is basically making terpene testing a requirement for all extracts. I understand if a processor chooses to make a terpene claim on their packaging why they would need test results to support this. If we are not calling out a terpene percentage, why is this a requirement? It would be interesting to know how this rule got proposed and why it was felt to be necessary. Any insight to this is much appreciated.	3/25/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Terpenes = NO	Labeling - striking "terpenes" and include other additions	4/9/2019
April 9 Live Comment	Lukas Hunter/Harmony Farms	WAC 314-55-102	Terpenes = NO	Acknowledgement of terpenes but not defined in WAC. Terpenes are stripped away in processing. Checking at every stage ups the cost. Retesting good. Policy to acknowledge retesting. Contact, repercussions, litigation/adjudication? Turnaround time issue to avoid delay to market. Clear process	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Terpenes = NO	Terpene testing adds cost	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Terpenes = YES	Appreciate that terpenes are acknowledged, but needs a definition	4/9/2019
April 9 Live Comment	Jim MacCrae/Straightline Analytics	WAC 314-55-102	Terpenes = YES	Like call out of terpenes. Terpenes subset, allow them to report beyond that. Traceability system an issue. Referencing mycotoxins no longer necessary. QA changes in 2017 made more dangerous. Water and moisture activity. Mold etc., should come back in. Retail should be tested for more than potency	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Terpenes = YES	Specific terpenes, create a subset, but carefully report	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	Test results	Available test results	4/9/2019
Email	Royce Schnepf	N/A	Test Results	<p>Create and fund a department at UW and WSU. UW deals with the western side of the states product and WSU deals with eastern. Bring in Central if need be. The purpose of these labs is to then test all weed that is to be sold in the state. They then log all data of the plant. THC Content, CBD, test it for any chemicals that are banned, log all of this information and then make this database accessible to the public. Since its a health issue, let people read what the companies are tested for and using. This would also prevent the current system of manipulation that exists in the testing industry. Right now they are letting people pay them money to say they tested at high levels. Colorado had the issue. California had it. We have it. Follow Michigans suit. Use a small portion of the taxes to fund school studies of the plant.</p> <p>The logging of Genetics would be mandatory. Companies are going to try and lock down the base plants all our current crops are based on. If Blue Dream is the base for someone elses plant and they then make sure no one can get their hands on blue dream via their power to purchase plants from others, this then presents a world in which certain groups will try and Monsanto the plants.</p> <p>All of this must be freely, and easily accessible via a website to any and all people. No limitations. No log ins. Just go to the site. Put in the company that you are interested in searching and view their history and see what their plants actually are.</p>	6/20/2019
Email	John Kingsbury	N/A	Costs	<ul style="list-style-type: none"> Some suggested eliminating five compounds for testing, thus eliminating the need for an expensive piece of equipment. Having not researched these compounds, we do not have an opinion. It seems worth investigating. Cost to the consumer should not be seen as a barrier. <p>The person from Testing Technologies suggested that the current cost of testing per gram equals 5 cents per gram at the production end. (That was the number based upon five pound lot sizes) To evaluate what that means to the consumer, let's assume a 5 cent cost turns into a 20 cent cost to the consumer through normal sales margins. That cost does not seem too great for something as important as testing. Let's say that cost was doubled (10 cents to the farmer, 40 cents to the consumer). Is that too high a price to pay to assure testing? [Keep in mind, that using those assumptions, everyone along the supply chain is realizing a profit margin on the cost of testing. With those assumptions, testing is a profit gain, not a loss. If the cost is just passed to the consumer -meaning 'no loss'- then doubling the cost would equal 10 cents to the consumer.]</p>	8/23/2019

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				Here is the point: we could double the per-gram cost of testing, pass that cost on to the consumer, even add a profit margin to it, and cost is not a barrier to testing within the parameters that we are talking about.	
Email	Shawn Denae	N/A	Testing Facilities	<p>Allow testing facilities to test cannabis with common, non-cannabis specific certifications:</p> <p>a. The current cannabis certification is both costly and ineffective. Labs have been certified by more qualified programs already established so let that be a business decision to test cannabis not a regulatory decision as to who can test. Allow professional scientists do the work they do.</p> <p>b. This will open up more labs (and competition will likely lower costs) to the industry and ease any bottle neck that would occur sans expanding the labs available to the industry.</p> <p>c. The sample limits would be so insignificant, if tests are on the entire crop at 3g, that cameras would not be needed as no diversion incentive would present itself. (Currently with a gross amount over the requirements needed, it DOES present an enticement for diversion because there is so much leftover product.)</p> <p>d. Lifting the certification will also avoid bottlenecks in testing changes by expanding labs go the industry.</p>	6/21/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Testing schedule	Testing/schedule per lot	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	All pesticide testing should be ubiquitous between DOH and LCB rules	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	Include limits of detection & LOQ	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	Chose i502 scope of testing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	Be able to do additional testing	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	Moisture content/water activity - revisit	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	Bring yeast/mold testing back in	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-102	Testing standardization	2 standards for concentrates - edibles/inhalants	4/9/2019
Email	Shawn Denae	N/A	THC Limits	<p>Lift THC limits on products for registered patients to bring down costs and give them what they desire:</p> <p>a. Resources are used for R&D to get products DOWN to the mg/serving limits, causing processors to spend more on labor, cutting agents; sugars, flavorings, colorings and testing, etc.</p> <p>i. These resources add to the final cost of the products and give patients inferior products. (Cancer patients CAN NOT take sugar and that is what is overwhelming in edible form in i502 products.)</p> <p>ii. Allow the plant to give what it gives without manipulation of the cannabinoids, which is happening now.</p> <p>iii. Few processors care about patients now because patients can't access in i502 what they need. Allow a market for patients and processors will come to fill the need.</p>	6/21/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	THC Range	Create reporting ranges based off of equipment used	4/9/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	THC Range	Range - 16 - 22%; -10%/ 10 - 14%, 14 - 18%, 18%+	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(1)(a)	THC Range	Impact on labeling: The presentation of potency values as an absolute number that represents all product packaged from a tested lot is a misrepresentation of the analysis with no scientific justification. We are unaware of any scientific measurement without an associated error. This labeling format provides the consumer with misleading information about their purchase and should be validated for consistency with the Washington State Consumer Protection Act (RCW 19.86).	4/4/2019
Email	John Kingsbury	N/A	THC Range	<p>Creating a tier system would:</p> <ol style="list-style-type: none"> 1. Provide consumers with more accurate information 2. Disincentivize THC potency as a primary driver in the market -which has obviously been a problem for patients 3. Discourage lab shopping and test cheating. 4. Would it lower lab testing costs? <p>I cannot stress enough how valuable and positive this one change could be for Washington's cannabis market. If I were to make a list of the top ten most urgent issues to address for medical cannabis, cannabinoid testing would not make the list. I am told by 502ers that cannabinoid numbers are a recreational sales issue. Since a plant does not really have a percentage of cannabinoids anyway, I am not sure how you test and label for cannabinoids in a manner that does not mislead consumers. My best suggestion is to label within a range, since that would be more honest and would tell the consumer what he or she should understand -which is that you cannot know within any accuracy how strong a sample really is, and so a best practice is to dose and wait a minute before dosing again.</p> <p>A cheap and honest approach might be to generically label autoflower plants with a label that indicates a THC</p>	8/23/2019

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				<p>range within 10% to 18%, and photoperiod plants within a range of 13% to 23%, and leave it at that. If the producer wants to market CBD content, then that producer could test and label for that, and try to pocket that extra value.</p> <p>I am not aware of plants bred for CBN content in the regulated market. There are a very few in the black market. I would guess that a certified medical consultant would not likely know anything about CBN, anyway. I suppose if that ever happens in the regulated market, then they could use the same rules CBNs as for CBD. But, again, THC levels seems like a recreational-sales issue. Putting a single THC percentage on a package seems misleading to me, though.</p>	
Email	Katie Mitchell	WAC 314-55-095	THC Range	<p>Current WA state current regulations and proposed regulations, regarding THC limits for cannabis edibles are stated at 10 milligrams per serving. Currently, if an edible tests over 10mg, then the edible would receive a 'fail' for its lab testing results. This results in large batches having to be destroyed, creating large amounts of waste and a negative financial impact on small businesses/WA state Licensed IS02 Processors. This also results in products that may test less than 10mg of THC, to prevent such 'fail' tests, therefore consumers may actually be getting less THC per serving than what the product may be labeled as.</p> <p>In WA state, if a marijuana flower test 'fails', there are opportunities to salvage the batch, by allowing the flower to be processed into concentrates, etc. If a concentrate batch 'fails' there are also opportunities for it to be further processed, to avoid total loss. If an edible batch 'fails' for potency, it is a total loss without salvage opportunities.</p> <p>When manufacturing products, the same recipe, the same process, the same machinery, and the same methods of measuring can be applied to every batch, every time, however slight variances can occur from unforeseen variables that may effect the product potency and weight. This is why the FDA allows a 20% variance on ingredients/nutrition facts (up or down). The State of Colorado allows a 15% potency variance on edibles (up or down). The state of Nevada allows a 15% potency variance (up or down). The state of Oregon allows a 10% potency variance on edibles (up or down). The state of California allows a 10% variance (up or down). The state of Michigan allows a 10% variance (up or down).</p>	8/30/2019
Email/ Doc	Shawn Denaee	N/A	THC Range	<p>Recognize THC as a range on the label – no test represents 100% of the lot anyway:</p> <ul style="list-style-type: none"> i. <10% ii. >10% - 14% iii. 14% - 18% iv. >18% (anything above this level is high-octane cannabis) <ol style="list-style-type: none"> 1. If a sample of that date's harvest tests at 17.43 it would fall in the 14% - 18% 2. If a grower wants to 'hedge the bet' they could harvest on a 2nd or more date(s) and take another test that may test >18% - their choice! 3. This deflates the enticement to inflate the test by 'cherry picking' and/or adulterating the sample by the lab or the producer 4. It is really more indicative of the harvest with a range and breeders will lay off the 'high THC' as the holy grail. We don't need rules to encourage growing Everclear cannabis as we do now! 	6/21/2019
Email	Katie Mitchell	N/A	THC Range	<p>Hi Kathy~</p> <p>A quick thank you for the opportunity to meet yesterday re: the packaging and label rules. I am very grateful to be included in the process.</p> <p>One thing that came up in conversations yesterday with Oregon and Colorado, was that they have potency tolerance variance (10% Oregon, 15% Colorado (?), and someone stated that CA was at 20% and FDA was at 20% on product ingredients (?)).</p> <p>As mentioned among the edible processors, a tolerance variance in potency would be very preferable as well, being if edibles test over for whatever reason, the entire lot would need to be destroyed (unlike flower lots, where it could be potentially extracted to salvage, etc.).</p> <p>I was wondering if the 'tolerance variance' concept on potency of edibles should be/could be be part of this set of rules/ discussion when considering changes to the QA testing/ Product requirement rules?</p> <p>Thanks so much again</p>	8/13/2019
Email	Dylan Thie	WAC 314-55-102	Total Cannabinoids	<p>As of now, the WSLCB requires testing on all finished products before they can be sold to clients. The current testing requirements only acknowledge 2 cannabinoids for THC and 2 cannabinoids for CBD, even though the spectrum is much larger. The testing lab we work with, Praxis Laboratory, tests for these cannabinoids: CBC, CBCA, CBD, CBDA, CBDV, CBDVA, CBG, CBGA, CBL, CBN, CBNA, CBT, THCA, THCV, THCVA, Δ-8 THC, Δ-9 THC. If there is a spike in the percentage of one of the unacknowledged cannabinoids, it will not be accurately portrayed through the product packaging, as the requirements restrict printing this information on the sticker. By labeling the product with test results containing 'Total Cannabinoids' when they only account for two kinds, portrays an inaccurate potency result and is very misleading to consumers. Accounting for and acknowledging all kinds of cannabinoids, will give the consumer a safer and more accurate understanding of the product they wish to purchase.</p>	8/26/2019

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Email	Dylan Thiel	WAC 314-55-102	Total Cannabinoids	Currently, total cannabinoids are calculated by the addition of Δ9 THC + Thca or CBD + CBDA while testing labs can test for CBC, CBCA, CBD, CBDA, CBDV, CBDVA, CBG, CBGA, CBL, CBN, CBNA, CBT, THCa, THCV, THCVa, Δ8 THC, Δ9 THC, among others. These other cannabinoids are not being added to the Total THC or Total CBD because of the language in WAC 314-55-102. Total THC and Total CBD should represent all of the total cannabinoids in the product and not just the total Δ9 THC, THCa, CBD, and CBDA in the product.	8/28/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-101	Use data	Data-driven policy (e.g. pesticide analysis)	4/9/2019
Email	J. Burns/Treeline Analytics	WAC 314-55-102(7)	WSDA Testing	This section is sufficient to protect the public from pesticides if random samplings of producer/processor locations are performed by the LCB, DoE and/or WSDA.	4/4/2019
Email with attachment	Mark Ambler/TIPA	None provided, but comments speak generally to WAC 314-55-102	WSDA Testing	WSDA should continue random and complaint based pesticide testing activities to identify issues and fix the underlying cause. WSDA should use fund #126 so that it ties those sampling and investigation costs to the pesticide or fertilization manufacturer. WSLCB funds <u>should not</u> be used to conduct random pesticide testing because this disconnects the fiscal liability of customer exposure from pesticide manufacturers. WSDA should audit and provide information to pesticide and fertilizer distributors. Last year we had to show local suppliers what the approved pesticide list was and how more than half of their products weren't on it. WSDA also has the authority to require manufacturers of pesticides which are not allowed on cannabis to label it as such in Washington.	4/12/2019
April 9 Live Comment	Flipchart Note	WAC 314-55-1025	WSDA Testing	Can WSDA be used? What is happening with the WSDA contract?	4/9/2019
Email	Danielle Rosellison	WAC 314-55-102	WSDA Testing	<ul style="list-style-type: none"> • Enforce the current rules using the WSDA contract, targeting strategic companies that will encourage the industry to change o You can hire a consultant to do this if you want to get the most bang for your buck. • Do not change the pesticide and heavy metal testing requirements for adult use cannabis • Allow for remediation if a product fails pesticide testing when pesticide testing of their own accord <p>The LCB has a contract with the WSDA for +\-35 samples a month for all pesticides and +\-35 for 1 specific pesticide.</p> <ol style="list-style-type: none"> 1. Use this contract to pull 8 end product, cannabinoid concentrate samples from the top 5 processors. For example: 502data.com states that the top five are NWCS, Grow Op Farms, Rolling Farm/SPP, Cowlitz County and Harmony Farms. 2. At the beginning of each month, pull 8 samples from 4 separate finished product concentrates (i.e. oil in a cartridge). <ol style="list-style-type: none"> a. Product randomly sampled should be packaged and ready to go for all marijuana infused concentrates for inhalation. This is important. It doesn't matter where the pesticides are coming from, the final product is still being inhaled. Thus making sure to test product that is mixed with whatever else they are mixing it with (i.e. distillate, terpenes, polyethylene glycols, glycerin, medium-chain triglycerides, flavinoids, etc.) is important. <ol style="list-style-type: none"> i. If you just pull the cannabinoid concentrate, a) you don't know if they are adding CBD isolate or THC isolate later and that needs to be tested as well and b) you don't know how the packaging may be affecting the product. We've seen products in CA failing Heavy Metal testing cuz they used cheap cartridges from China. If consumer safety is paramount, and we want to error on the side of caution, the end product, in the packaging, needs to be tested. ii. I realize that the LCB is uncomfortable requiring recalls at the retail level, which is why testing end, packaged products from the processor is an appropriate compromise. b. Ignore edibles for the time being, but later when we get concentrates that are inhaled under control, test the final cannabinoid product that is going into the edible. c. Enforcement needs to check traceability and make sure that the sample they are picking from is representative of the sample in LEAF or the third party traceability program that the processor is using. <ol style="list-style-type: none"> i. If the officer is shown 100 units to pick from, but LEAF states that there should be 10,000, enforcement needs to be able to recognize that they are not being given the opportunity to take a representative sample. The company is hiding something... ii. Oregon requires the sample picker to match the weight/units in metric with the sample size they are given to pick from. d. It needs to be two different units from the same batch so that the two separate units can be compared. If one fails you have another test immediately available. 3. If they fail, use the other +\-35 samples to re-test for specific analytes in the same batch ideally the same month, however the next month would be fine too. <ol style="list-style-type: none"> a. Question – can sales of tested batches be put on administrative hold? Like they can't sell them while waiting for results? It looks like results are coming much faster than they used too. I would have enforcement encourage the processor to keep the product at their location (i.e. don't sell it) and increase the penalty or throw the book harder at them if they did sell it while waiting for results. At least scare them that if they sell it while waiting for results, and they fail, LCB will throw the book at them. 4. At the beginning of the following month, pull 8 samples from the next 5 processors. For example, 	5/30/2019

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				502data.com states that the next 5 are: Viva Cannabis, Saturn Group, Top Shelf, 7POINT Holdings, Phat and Sticky. 5. Repeat steps 2-5.	
Email	John Kingsbury	N/A	DOH compliant product	The guy at Clear Choice Cannabis told me that they do not stock DOH Compliant flower because nobody makes that anymore. They pulled two brands: Fireline and Skord. Neither were DOH compliant, but both claimed to be pesticide free. After an employee at the medical counter insisted that there is no such thing as DOH Compliant, and that all products are tested for pesticides, while standing in front of a wall of products with DOH stickers on them, I actually conducted a clinic at the counter for four employees on the DOH Compliant product and pesticide testing. A few weeks back, employees at both THC store also claimed that "nobody makes Compliant flower anymore." I have two THC complaints sitting here, and don't know what to do about CCC. They are becoming rich selling poison to people who don't know any better.	8/20/2018
Email	George Lincoln RJ Lee	WAC 314-55-102(1)(i)	Application for Certification	Remove % moisture	10/11/2018
Email	Amanda Mac	N/A	DOH compliant product	Thank you for taking the time to read this message. I am a colleague of the cannabis industry and use cannabis to keep my immune system strong to deal with chronic illness, as well as chronic pain. I take great issue with incredibly UNSAFE products being available for patients like myself on the retail shelves. I am lucky in having the knowledge to steer clear of product that will damage my health. Unfortunately, most of the cannabis consumers have a long way in education before they understand the risks and dangers. I'd also like to point out most store owners, managers, buyers, AND budtenders have a long way to go as well. We simply can't ignore this, what if someone gets hurt? How will that look? This beautiful project we are all building together could come crumbling down and that would be a real shame. We are supposed to be leading this movement and we are way behind on some things. I will say, it is great you all work so closely with the Cannabis Alliance. They speak very clearly for so many of us. Thank you for that!	9/13/2018
Email	George Lincoln RJ Lee	WAC 314-55-102(1)	Certification	Change certification to allow for individual tests as opposed to the 5.	10/11/2018
Email	George Lincoln RJ Lee	WAC 314-55-103	Good laboratory practice checklist	Only 41 of 71 uses are valid; 30 should be removed. Remove any/all "calibration" wording in checklist that was intended by ISO for calibration laboratories, so as to make less confusing.	10/11/2018
Email	George Lincoln RJ Lee	WAC 314-55-102	Intermediate products (?)	Checklist Section 37c; is redundant to 28(d)	10/11/2018
Email	George Lincoln RJ Lee	WAC 314-55-1035(1)	Laboratory certification - suspension and revocation	Reconsider use of term "summarily" (definition: without customary formality; immediately).	10/11/2018
Email	George Lincoln RJ Lee	WAC 314-55-1035(1)	Laboratory Certification	Add "certification of any test to title. Allow suspensions for individual tests as opposed to full suspension for failed PT's of one test; consider expanding suspension beyond just PTs (ex: on site audit shows inadequacy for mycotoxin, but other analyses fine).	10/11/2018
Email	Galadriel Walsler Buddy Boy Farms	N/A	Lot Sizes	I am the GM here at Buddy Boy Farms, I wanted to weight in on the proposed rules on mandatory pesticide testing. First let me say that I am NOT opposed to it, I actually think we need it, especially for medical patients! My big concern is that we producer/processors run on such a razor thin margin, that any extra cost is very hard for us and usually results in layoffs. I do believe it is important to have pesticide testing so to offset the cost I would propose that you increase the lot size for testing from 5# lots to 15# lots. The benefit to increased lot size are many, including easier tracking for us.	8/9/2018
Email	Brendan McMernan Medicinal Genomics	N/A	Microbial testing for cannabis by USP	Our firm was asked to provide a scientific overview of microbial testing for cannabis by the USP (information provided to USP is attached to email).	8/30/2018
Email	John Kingsbury	N/A	MMJ Compliant Products	I was asked to forward these complaints (and whatever other complaints against certified cannabis consultants I have floating around) in order to convey consistent frustrations that I have experienced while seeking help. My intent is not to single out these two budtenders, but to communicate knowledge deficiencies in the majority of certified consultants I have spoken with. A large percentage of the consultants I have spoken with believe that pesticide testing for recreational products and DOH Compliant product is the same. Many cannot identify DOH Compliant product already on the shelf. I am still surprised how budtenders do not know how to find pesticide information about specific products. (Provided copies of two DOH complaint forms, describing two employees of Dockside Cannabis apparently unable to answer his questions re DOH compliant product)	8/20/2018

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Email	Steven Fuhr Toucan Farms	N/A	Pesticide testing	<p>In consideration of the open comment period on lab testing, I would like to make the following suggestions: 1) Pesticide testing should be mandatory. We are the only state in this country, and the only cannabis-legalized country in the world who does not mandate pesticide testing. Why? Is it that Washington does not concern itself with public safety, or see the liability is it taking on by not adopting sensible testing standards? Is it because big, well funded, politically connected growers have said it's too expensive? With blind test after test showing the majority of flower and concentrates contain either a banned or unsafe level of pesticides, I really do hope the LCB comes to their senses on this - soon.</p> <p>2) If pesticide testing is adopted, larger lot sizes should be allowed. No other product on earth gets tested in such small batches as WA cannabis. It is nonsensical. (SEE Oregon testing rules for guidance on well thought out testing rules)</p> <p>3) CBD products tested in states that have the same, or higher (See OR testing rules) guidelines for testing that WA should be allowed to carry over to our state, and not require additional testing. Again, this is nonsensical. Oregon tests for 3 times as many pesticides as we do, and their labs are certified by the same R.J. lee Group our labs are.</p> <p>4) Lab samples should be taken by lab staff or some 3rd party to ensure a non-biased chain of custody. (See OR testing rules for hemp where ODA staff take samples) The labs already send staff to the grow to pick up samples. To have them stake the sample for an added \$10 or so would be a small price to pay to make sure growers are not sending in doctored or unrelated lot samples, which happens every single day...</p> <p>5) No one - not one lab director - not even the head of the WDA (See his quote "I have no idea why we are using this test") knows why we use Gram Negative Bacteria (GNB) tests on plant material. It was NOT designed to be an end product test. It is a "crop indicator" test used on large fields. There are over 3,000 GNB; half have no name, and only a handful are dangerous, like E. Coli, and we test for those specifically. To have flower lots fail for an unnamed bacteria that is not deemed dangerous is nonsensical and onerous.</p> <p>6) Much like the GNB testing, not one lab director, not one person as WDA thinks water retention testing is being used correctly. It is meant for large batches of edibles processed - not plant material and not small batched of the same recipe. In all other industries, once a recipe is deemed to have passed, it is no longer given unless the recipe changes. To test plant material and every small edible batch is nonsensical an onerous.</p> <p>The overriding suggestion would be for the LCB to consult lab directors and food scientists to see how these test are really used in every other field, and apply this same rational standards to cannabis products. I have asked lab directors if anyone ever consulted them as newer testing rules were adopted, and get a confused look on their face - no ever does.</p>	8/14/2018
Email	Brian Fogg	N/A	Pesticide testing	<p>Due to my compromised immune system due to hemodialysis and kidney transplant, I definitely cannot have pesticides in my cannabis. The current rules from the LCB state no home grows are allowed unlike ALL Other states that have recreational marijuana. Current recreational retail marijuana in Washington state does not offer organically grown or pesticide free cannabis. As a cannabis patient, I would also like access to a cannabis farmer's market to have real choices for affordable quality medicine. I would like to have access to seeds and closed of medical grade cannabis as well.</p>	9/3/2018
Email	Darcy Irwin	N/A	Pesticide testing	<p>I believe that Cannabis/Marijuana product packaging/labeling should specify ALL additives used at any point; from seed to sale. Organic or "Clean Green Certified" means nothing to me. For example, I firmly believe I have a sensitivity or issue with "Neem Oil." I go out of my way to avoid this chemical as best I can. Allergens (Milk, Gluten, Nuts, Tree Nuts, Soy, etc.) commonly listed on food ingredients allow a consumer to easily determine if that product is suitable for them to consume. Why can't this be applied to Cannabis in Washington State? Also, if this goes any further, I think the language needs to be looked at very carefully. "Pesticide-Free" and "No Pesticides Used" mean two different things and still do not guarantee that the product was not present in a facility where pesticides/additives are used. "Pesticide-Free" can mean it didn't "show" any pesticides/additives present when tested; it doesn't necessarily mean that additives/pesticides weren't used at one point in production... maybe there's a "new" chemical not showing up in tests yet. Also, "No Pesticides Used" does not guarantee that the specific plant material didn't encounter plant material that was treated with pesticides/additives (i.e. allergen labels stating product was in same facility as tree nuts, milk, etc.). The bottom line is that I want to know what I'm putting in my body. I have Crohn's Disease and use Cannabis to help manage my symptoms. I don't want to compromise my health any more than necessary by having to "gues" what's in my Washington Cannabis Products.</p>	10/3/2018

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Comments Received re WSR 18-17-041 (Filed August 2018)

Listen and Learn Sessions April 2019 and August 2019

Email	Gordon	N/A	Pesticide testing	<p>A few words concerning pesticide testing. Hopefully the LCB board is looking well beyond the current WA DOH 15 list. Other jurisdictions in the State's and Canada are working on list that contain 60-95 compounds with action levels that can be hit by actual competent laboratories. The new emphasis on actual scientific validation of methods is where the system should be headed. A lot of WA labs will throw up resistance due to the work and know-how involved but at some point you need to rip the band-aid off.</p> <p>When the Fed's get around to a legalization solution the labs will have to then meet EPA (FIFRA) guidelines. Better to be moving in that direction than to wait for when the other shoe drops and suddenly no lab can meet the standards.</p> <p>I do applaud the efforts to continue to improve the system around testing as it pertains to consumer safety.</p>	10/24/2018
Email	James Paribello The Laboratory Guild	N/A	Pesticide testing	<p>Please find attached three documents providing feedback and responses to the CR 101 - Quality Assurance Testing and Product Requirements - as issued on August 8, 2018, from The Laboratory Guild, which represents several affiliated certified testing labs in Washington State. The Guild's primary concerns are related to:</p> <ol style="list-style-type: none"> 1. Pesticides 2. Heavy Metals 3. Mycotoxin Tolerance 4. Microbial Tolerance <p>The priority issues addressed in our responses are:</p> <ol style="list-style-type: none"> 1. Lot Size Increase 2. Time of Service Payments 3. LIMS Enforcement - Data Driven Red Flags 4. Dry Weight Correction 5. Name on Label 6. Sampling Protocol 7. Public Testing 8. Precision of Reporting and Reporting Ranges 9. Testing Expiration Date <p>The document titled "Product Representation" explores the concept of whether the product on the shelf matches the Certificate of Analysis that is attached to the lot number applied. In this document, we cover multiple issues such as sampling, moisture, laboratory inventory management systems, lot size, potency, enforcement, labeling.</p> <p>We explore "Time of Service Payments" as an issue that leads to industry bad behavior and exposes businesses to federal violations.</p> <p>We point to some of the issues within the traceability system and how they impact the labs while providing some recommendations on how to fix them in the document titled "Public Safety Liabilities - Traceability."</p>	10/24/2018
Email	Danielle Rosellison Trail Blazin' Productions	N/A	Pesticide testing	<p>Body of email addresses concerns regarding research, health affects of pesticides, why pesticide testing is an issue when it may not have been previously, and pesticide testing is an urgent concern to the regulated community.</p>	8/27/2018
Email	Kristy Abel	N/A	Pesticide testing	<p>As a Canadian, I have regularly crossed the border since 2014 to purchase from your local pot stores (and of course, have NEVER crossed the border with it). WA pot stores are my first stop when I come to Washington. That said, I really think that you guys need to require pesticide testing for pot or at least do random pesticide testing of product on the shelves. It's weird to me that you don't. Wasn't legalizing pot about making sure what we bought was tested and safer? I will continue to come to the States to purchase pot until October 17th, which is when all of Canada goes legal. Canada's rules for pesticides can be found here. In Canada, only 20 pesticides are allowed in products. Health Canada will begin conducting random testing of cannabis products produced by licensed producers to provide added assurance to Canadians that they are receiving safe, quality-controlled product. I think Washington should do something similar: random testing of all pot or just require testing on all pot.</p>	9/14/2018

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Email	Jenn Baggs	N/A	Pesticide testing	<p>So I don't smoke weed, but my husband does. He has a qualifying condition, but is not registered in the patient database as we are skeptical about the database's security. The benefits also don't outweigh the risk, considering all he would get off is the sales tax and not a discount on the ridiculously high excise tax. We have looked high and low for "246-70 compliant" product, but we can't find it anywhere. How can my husband get access to the medicine he needs? Therefore, he resorts to "normal" weed, but through researching on the Department of Health's website, it appears that only 246-70 compliant product has been tested for pesticides and that "normal" weed is not. When we have asked budtenders, they assure us that "all product is compliant" and that "all products have been tested for pesticides". But that's not what my research has discovered. I don't feel like the budtenders are intentionally lying to us, but they are definitely misinformed and spreading bad information to patients whose health depends on accurate information.</p> <p>You know what would be really great? If all weed in the stores was tested for pesticides. That way my husband would have larger swath to choose from and we wouldn't have to worry about finding 246-70 compliant product. If this is something that is within your purview, please consider pesticide testing all weed in the stores so that patients like my husband can have the access that their health depends on.</p>	9/15/2018
Email	Susanne Brown	N/A	Pesticide testing	<p>As a long time consumer, I was shocked to learn that pot is not tested for pesticides! I learned this from one of the budtenders I recently spoke to in Maple Valley, which was funny because every other budtender I've ever talked to has sworn up and down that pot IS tested for pesticides. However, this budtender seemed incredibly well informed and assured me that no, pot is NOT tested for pesticides in Washington. I realize you guys probably have a lot to do and focus on, but this seems like a no brainer to me. Why wouldn't we require pot to be tested for pesticides? Considering we are concentrating the pot and then combusting it, literally changing the chemical make up of the flower, it seems irresponsible to not require pesticide testing in the legal market for all pot products. As a consumer I want to know that the product I'm purchasing is safe and thus pesticide testing seems immanent. Please do the right thing, make haste, and require mandatory pesticide testing for all legal pot products now!</p>	9/14/2018
Email	Pinky Vargas	N/A	Pesticide testing	<p>It has come to my attention that cannabis is (still) not tested for pesticides in the adult use market. This seems like it is a necessary test that may have been overlooked by the Liquor and Cannabis Board. I am writing you today to ask that you review your rule making on this issue and analyze whether requiring pesticide testing in the adult use market makes sense for consumer and patient health and safety. I realize that the data and research are still out onto whether pesticides are "bad" for you, but I would anticipate that a conservative approach, considering your mission, would make sense. I also recall seeing a story in The Stranger a while ago, that showcased a random selection of retail cannabis of which a large portion failed a pesticide screening. Even with that article in 2016, it appears that the Liquor and Cannabis Board has hesitated to address illegal pesticide usage in the 502 market. I kindly ask that you review your rules and regulations around mandatory pesticide testing for adult use products, while taking into account the effect your rule changes will have on licensees. Consumer safety should be the forefront of a state agencies concern, followed by making sure your rules do not overly burden the small businesses who are the backbone of the cannabis industry.</p>	9/13/2018
Email	Sam Lamb	N/A	Pesticide testing	<p>It has come to my attention that weed is not pesticide tested in Washington State. That is so not cool! As a long time Washingtonian, I value our PWN lifestyle which includes eating organic food, valuing nature and living life to its fullest. I completely approve of legal, regulated cannabis, but I sincerely do not approve of a lack of pesticide testing requirements. We must hold this new industry to a high standard, including pesticide testing all products for consumer and environmental safety. Other states are getting it right and we are not! Please require mandatory pesticide testing effective immediately.</p>	9/12/2018
Email	Ian Cameron	N/A	Pesticide testing	<p>I'm encouraged to see that WA state is considering rulemaking changes. Specifically, <u>adding pesticide and heavy metals testing is a needed, common sense step</u> to improve confidence in products, the industry as a whole and, more importantly, to help protect the health of Washington State residents.</p>	9/11/2018
Email	Matthew Friedlander Skagit Organics	N/A	Pesticide testing	<p>Remove the requirement that the producer designate the material as medical and allow a processors who does not grow should designate material they purchase as medical quality. Require these processors to perform pesticide and heavy metal testing. Remove the requirement to test the oil for pesticides and heavy metals if the flower has already been tested/passed. Topical products should not have an upper limit on THC content or servings/serving sizes. Sample units should be increased for concentrates for inhalation to two grams per month with one unit being no larger than .5 grams. Right now it would take our company 6 months to sample one store all our different kind of oils.</p>	9/6/2018

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Email	jlucius76@gmail.com	N/A	Pesticide testing	I've never done this before. I have never responded to a public comment. Honestly, cuz I don't think that what I say matters. But seriously, I have never bought from the 502 stores cuz I don't trust them. I don't trust the stores. And I don't trust the government. This was all reiterated to me when I recently learned that 502 products aren't tested for pesticides. Case and point. You want to stop the illicit market. At a bare minimum you should be testing for pesticides. At least when I grow my own 4 plants or buy from my buddy I know pesticides weren't applied. Why? Cuz I trust him!! Cuz I know him. But when you start buying commercial weed, all rules are out the window. Gone are the days of trusting your buddy to grow for you. Capitalism comes into play and all of a sudden they are spraying every pesticide known to man on the plant to get the most bang for their buck. Please fix this. Please do the right thing. Please require pesticide testing effective immediately. I would consider switching from consuming my friends cannabis to buying in the legal, recreational market if you required pesticide testing. Require pesticides testing now. It's a no brainer.	9/2/2018
Email	Brienne Boesiger	N/A	Pesticide testing	We consume cannabis in our household, and have for a very long time. We organic and spend a lot of time trying to maintain the health and wellness of our family. We have been shopping at the dispensaries since 502 passed. We don't really stick to any product or store, but we ALWAYS ask for product that is free from pesticides. The budtenders have always told us that everything in the store is tested for pesticides. We recently learned that this is not true. What kind of harmful effects has my household been exposed to due to this lack of testing? What kind of long term effects will my family see because the state did not require pesticide testing? And who will we hold responsible if we get sick or have adverse health effects? The budtenders? The state? I voted for 502 because I was excited to have legal access to cannabis, tested and regulated product. Finding out it is not pesticide tested, and that the budtenders and retailers and TELLING people it is, misinforming people, is preposterous. And, as I mentioned, it not one or two stores; it is ALL if the ones we have spoken to. Please do the right thing. Please use your power to require mandatory pesticide testing immediately. Thank you for listening and your consideration.	9/2/2018
Email	Sanna Nour	N/A	Pesticide testing	I'm an adult cannabis user and I think it's ridiculous that you don't require pesticide tests before cannabis is put in stores, not to mention mold.	9/2/2018
Email	Kari Davis	N/A	Pesticide testing	I just heard that recreational weed isn't tested for pesticides. I am dumb founded. Baffled. Stunned. Are you serious? As a Cannabis consumer I assumed the product that I was using was safe! I thought part of legalizing cannabis was making sure it was tested for things like pesticides, things that can affect people's health. And what really baffled me is that	9/2/2018
Email	Amy Ross	N/A	Pesticide testing	We are new to the industry and are trying to make it work. The amount of money required to produce product with falling prices make our margins so very thin. If we are required to perform additional expensive pesticide testing on outdoor product it will be cost prohibitive to producers. At the moment, the retail shops have the producers between a rock and a hard spot, demanding lower prices, if the producers have to bear the cost of additional testing and prices continue to fall the tier 1 growers will go out of business.	8/10/2018
Email	German Burtscher	N/A	Pesticide testing	I have spent the past 4 years in the WA 502 regulated cannabis industry. At Willie's Reserve we launched one of the leading pesticide testing efforts for flower products and subsequently for concentrates. I have also spent months consulting a couple of the largest distillate manufacturers in their sourcing of "clean" flower, working with Medicine Creek, Confidence Analytics, Trace Analytics and Molecular Testing Labs. It is my professional opinion that at this point the vast majority of concentrates in our market contain pesticides above the allowed levels. It is incredibly challenging and requires rigor and discipline to find flower that has only the smallest trace amounts of pesticides (allowed pesticides). One has to consider that concentrates can amplify existing below threshold levels by 15-20 times, which will lead the end product to surpass by a factor of multiple times the allowed level of contaminate. Suggestion: 1. Mandate pesticide testing for each batch of no more than 500 grams 2. At \$125-150/test, the per gram burden would be \$0.25 to \$0.30 per gram. The increased volume of pesticide tests will allow labs to lower their prices (Confidence in running a 2 months special fo \$70 per pesticide test, indicating availability of an appropriate price elasticity). 3. Mandate testing for ALL concentrates If we rigorously test concentrates we almost certainly will force the growers to adopt even stricter grow management procedures. It is my opinion that mandatory concentrates testing for pesticide has the biggest impact in our market as it forces the flower supply chain to clean up and has the lowest per gram margin impact to the industry. Keep flower testing on a random basis and not mandatory. If we have to test flower, let's test per harvest and strain or room and no less than 100lbs wet lot per strain (= about 20lbs of cured flower).	8/13/2018

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Email	John Kingsbury	N/A	Pesticide testing	<p>I would like to make the following comments about product testing rules.</p> <ol style="list-style-type: none"> 1. There should be mandatory pesticide testing. 2. Pesticide testing should not be random or infrequent. 3. Action levels should be consistent with current action levels and aligned with DOH testing levels. 4. An attempt should be made to align lot sizes and standards with the lot sizes and standards for DOH standards. 5. Penalties for violating the rules should be severe and certain. 6. Penalties for violating pesticide rules should be certain and should not follow the enforcement practices of true party of interest violations or current pesticide violation practices. Failure to issue penalties is corrosive to compliance and sends the message that LCB is not serious about compliance. Avoiding penalties by altering the definitions of words, or by only "focusing on bringing licensees in compliance" continues to teach licensees that there is no downside to cheating. 7. Farms should not pull their own samples. 8. Samples should represent each harvest of a given strain. There should be no fewer than three samples per strain/lot. 9. heavy metal tests should focus on crops grown with synthetic fertilizers, particularly those grown hydroponically. 10. claims of "no-pesticide" products should be listed conspicuously on the label. What "no-pesticides" means should be defined. 	8/19/2018
Email	Francine Worden	N/A	Pesticide testing	I am a consumer and I would like you to require mandatory pesticide testing for all adult use cannabis as soon as possible.	8/18/2018
Email	Nichole Carubia	N/A	Pesticide testing	I am writing to respectfully request that your office immediately begin pesticide testing of all adult use products. As a mother of a teenage son I am concerned about his getting his hands on tainted product that has the potential to hurt his brain for years to come. This is a consumer safety issue and encourage your office to do something immediately to remedy the situation. Everyone deserves pesticide tested product. Please use the resources you possess to make this happen as soon as possible.	8/18/2018
Email	Charlene	N/A	Pesticide testing	I am a parent and grandmother and I would lie you to require mandatory Pesticides testing for all adult use cannabis as soon as possible. Hopefully this will save lives!	8/18/2018
Email	Ariana Ramirez	N/A	Pesticide testing	I am a patient and advocate. I would like you to require mandatory testing for pesticides on all adult use cannabis as soon as possible...as in now!	8/18/2018
Email	Kristin Kato	N/A	Pesticide testing	As a consumer of cannabis who is mindful of my health I ask you to please implement mandatory pesticide testing ASAP. It is not fair to the consumer to unknowingly ingest/consume products bought from i502 retail stores that are laced in pesticides. We need to put a stop to this before people have lasting, long term effects. Please implement this law and make it mandatory to have every harvest be pesticide tested. I would appreciate knowing I truly am consuming pesticide free cannabis. This is so important to me along with so many others. The people that don't care are most likely unaware of the rate at which pesticides are used in the industry, it's heartbreaking. Thank you for taking the time to read this and considering this option. We have to act now!!	8/21/2018
Email	Jon Archuletta	N/A	Pesticide testing	Hello, my name is Jon Archuletta. I'm a 22 year old Washington resident who is an avid user of cannabis. As a consumer I like to know what I'm putting in my body and the effects it can have on me, long and/or short term. I've always been a user of pesticide free cannabis and plan on staying that way. However it troubled me when I found out that our state does not require producers to test their product for what could possibly be dangerous pesticides. I always try to see the good in people but everyone knows that there could be and most likely is someone saying their product is pesticide free when it really isn't. It's not fair to us consumers to have to take the chance on something that should never be a gamble in the first place. I'm not the kind of person to usually do this kind of stuff and get involved but when I found out we are the only legal state that doesn't require the testing I kind of thought to myself "why the hell not?!" If you can give me evidence that all those other states are doing it wrong and WE'RE doing it right, you'll never hear from me again. Promise. Until then I plan on getting involved!	8/21/2018
Email	Brooke Nilson	N/A	Pesticide testing	I am a patient and I would like you to require mandatory pesticide testing for all adult use cannabis as soon as possible. I am aware that medical compliant product requires pesticide and heavy metal testing, but I am have a very difficult time finding compliant product. The budtenders assure that me that ALL product is pesticide tested, but I am sure that is not accurate. As a leukemia survivor, I believe that part of the reason I'm still here is because of the pesticide tested product I used during treatment. However, due to the lack of pesticide testing required by the government and the lack of medically compliant product, I am unable to continue my treatment. Requiring pesticide testing for all adult use product would allow me to continue to shop in the legal, retail market and purchase product that I know is safe for me. Please help as I know you have the power: require pesticide testing on all adult use product as soon as possible.	8/21/2018
Email	Brian Stone/Jane Stone	N/A	Pesticide testing	We are patients who use Cannabis medically. We are also senior citizens. We must know what is used to grow our cannabis. We know that most pesticides [compromise] our immune systems. We urge you to pass regulations that makes pesticide testing mandatory for all Cannabis products so we can be informed consumers.	8/22/2018

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				This is extremely important and demands immediate action. Thanks you for your attention, and we look forward to positive action on this issue.	
Email	Dawn Darington	N/A	Pesticide testing	<p>1) Testing of raw bud should be done at the farms by a representative of the LCB or directly by Lab employees with supervision by the LCB. Producers either pick the top cola, which does not represent the actual levels of cannabinoids in the whole plant, or, pay independent (illegal) growers to grow samples for them to have tested. Let us remember that this is an industry that has grown out of criminality. After 80 years of illegality there were few players to fill the void other than criminals. Too many people in this industry continue to have criminal thought processes. The samples need to be chosen by the LCB and transported directly to the labs. This would also eliminate the need for "lot sizes" by weight. This could be done by monthly "compliance checks" similar to the ones done at retail stores.</p> <p>2) As additional Producers meet the standards for "Medical," the use of synthetic pesticides should be eliminated. This is especially true of plant material used in making concentrates. When cannabis is concentrated, so are the pesticides used during the growing process. We don't know all of the destructive results, of not only concentrating pesticides but how the human body is affected by the combustion of said chemicals.</p> <p>3) Butane is a neurotoxin. It destroys brain cells. It is one of the most addictive substances on the planet. It needs to be banned in the processing of cannabis. It is a very effective solvent. It will take just about anything off of anything. That is no justification for allowing it to be used in processing cannabis. We are already seeing the damage it does to habitual users. People who used to be pleasant productive people are becoming semi-functional, paranoid, angry, irrational, then the perpetual headaches begin. When people use BHO they are actually huffing butane. The destruction of one to three thousand brain cells feels euphoric. People think they are getting the high from cannabis but actually they are getting high from huffing butane. The cost, down the road, for this will be tremendous both financially on our society but also huge in personal suffering.</p> <p>4) The market was not ready to eliminate "medical" stores. The Processors do not have many products needed by chronically ill patients. Selection is improving but the levels are inappropriate. There are patients who need much higher levels of THC than currently allowed by the rules. These products should be produced ONLY by medically certified Producers and sold by Medically Endorsed stores.</p>	8/23/2018
Email	Keith Coleman	N/A	Pesticide testing	I am writing today to request an emergency rule to require pesticide testing IMMEDIATELY. It has come to my attention that recreational weed is not tested for pesticides in WA. This is highly concerning to me as a consumer. Please do the right thing, for public health and safety, and require pesticide testing for all recreational cannabis products immediately.	8/29/2018
Email	Shawn DeNae Wagenseller Washington Bud Company	N/A	Pesticide testing QA testing in general	All, please read attached regarding this CR101 on Quality Assurance and Product Requirements. I admit to pushing this deadline to the last minute is not optimal but hope my suggestions are not discounted by any standard.	10/24/2018
Email	Crystal Oliver Washington Sungrowers Industry Association	N/A	Pesticide testing QA testing in general	Generally, attachment notes the following: 1. Substantially increase lot sizes in an effort to decrease the overall cost of compliance & testing for farmers. 2. Conduct pesticide testing on a per harvest basis, rather than a per lot basis. 3. Establish clear rules regarding farmer's right to have additional test performed to disprove false positives. A number of our members report receiving false positives from existing pesticide test providers.	10/31/2018
Email	Dr. James Macrae Straightline Analytics	N/A	Pesticide testing QA testing in general	Please consider reversing the changes in QA rules that were implemented on Aug 31, 2017. Specifically, once again require that molds and yeasts be included in the standard microbial screening suite and return the maximum allowed levels of residual solvents to their original levels. Consider retaining mycotoxin testing and extending such testing to include the testing of infused products ready for sale at retail.	10/24/2018

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Email	Toni Nersesian/Tom Barlow Palouse Farms	N/A	Pesticide testing Lot size	<p>In regard to changes you are considering: Lots Please increase the lot size to 15 lbs. For Tier One's, we would also need to be able to combine harvests to achieve 15 lbs.</p> <p>Potency testing For strains we consistently harvest, change to using an average range of THC, THCA and CBD</p> <p>Pesticide testing Heavy metal testing</p> <ul style="list-style-type: none"> • Please do NOT include pesticide testing in the new rules until 2020. <p>If a medical grower WANTS to pay for pesticide and heavy metal testing, let those growers pass the cost along to the retailer and the customer. While we appreciate the input from medical customers, they are a minority of the market. We do not believe the recreational marketplace will support increasing prices for new tests. The last changes made to the lab test requirements increases our 5 lb. lot lab fee by \$35. Our recreational prices did not go up, at all. Again, the medical customer should be glad to pay the extra fees, the rec customer does not value the tests. I disagree with some of the organizations that have supported this, even though I am a member. At this time, members and others who want the tests need to step up and pay for those tests on their own. We truly cannot afford another financial burden. If the customers decide to pay higher prices for products that have pesticide and heavy metal tests, the rest of the producers will also do the tests. Let the consumer support the additional tests. It will work our best for all.</p> <p>Sample Deductions</p> <ul style="list-style-type: none"> • Restructure the limit of how many samples per month for both the store and employees. Customers count on budtenders to guide them in finding the right product. This includes body effect, head impact, health and wellness abilities. The budtender needs to be able to be familiar with store products to guide the customer to the correct product. Many of our stores have 24 employees. We are allowed to "sample" 8 grams, which equals .33 gram per employees. Up to one gram per strain, per employee, would be fair. Let us decide how many employees we can cover. <p>Labels UBI #</p> <ul style="list-style-type: none"> • Remove the UBI # or at least replace with the 502 6 digit license number <p>The UBI # is not used for any other labeling nor identification</p> <p>Other changes as advisable</p> <ul style="list-style-type: none"> • The Gartner Report: Because of the problems with LEAF and ensuing time and financial losses, either: <ul style="list-style-type: none"> o refund 2018 Producer, Processor and Retailer fees o reduce 2019 Producer Processor and retailer fees substantially to adjust for 2018 losses to the licensees o Return fees to 2016 rates 	10/3/2018
Email	Lara Kaminsky	WAC 314-55-102	Pesticide testing Remediation Lot size	It is imperative that we have a strategic, well thought out plan BEFORE the sungrown harvest comes down. (Includes 8 page letter, touching on suggested language for remediation, increasing lot size, and implementation strategy).	8/26/2018
Email	George Lincoln RJ Lee	WAC 314-55-102(5)	Proficiency testing	Insert guidance for major equipment failure; allow for subcontracting tests beyond myco, metals, pest.	10/11/2018
Email	George Lincoln RJ Lee	WAC 344-55-102(1)(d)	Residual solvent screening	Remove "isomers thereof"	10/11/2018
Email	George Lincoln RJ Lee	WAC 314-55-101	Sampling Protocols	Add specifics to sampling from ASTM WK 64336; allow for Phenova type PT scheme (purchasing and storing product).	10/11/2018
Email	Karla Ward	N/A	Standardized testing Pesticide testing	It is my understanding that testing for pesticides is not part of the required assay for cannabis producers. I strongly, and earnestly, request that such a requirement be applied to the industry, and that the array and methods for cannabis testing be standardized across the industry.	9/24/2019
Email	KK	N/A	Transportation licensees to perform sample deductions and pickups	Please consider an explicit allowance for transportation licensees to perform sample deductions and pickups if producer/ processor submitted samples will no longer be allowed. This will reduce the burden of the labs providing field agents and sample transportation. Please feel free to write back anytime for clarification or more info.	10/2/2018
Telephone Conference	Dani/GOAT Labs	N/A	Standardized testing Negative lab Impact	Standardized testing is preferred. Most labs are barely making it. Doubling lot size, millions in equipment. Some labs are undercutting budget. Currently, charge \$90 for i502 testing (mycobio/potency/everything) and makes \$6 profit. Others charge \$70. Trace charges \$180 for the same tests. Time of service payments would help. Proposed rules would cut revenue in half.	3/25/2019

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Email	Dan Moen	N/A	?	<p>So, you found this plant is NOT easy to maintain...!! Funny... We told the first legal law makers!! As a full on breeder from over 45 years, I can tell you this... The ONLY way to create this Cannabis industry... to separate the Frauds from the real deals... To actually see firsthand QUALITY and Real cultivation practices... One needs to do so... With ZERO chemicals, and ZERO pesticides!! IF your legal 502 people can accomplish this...then Wa State can set the Absolute precedence in ANYTHING Cannabis!! This will create a working model for ALL Rec/Medical applications! This will show the World, Wa State listens to the Pioneers who actually Started this whole movement! Creating this Zero Chemical model, will fine tune the Real Cultivators, and create a huge Learning development program for all! This will eliminate the need for Tainted water leech age into the environment, and make people happy! Every state will see Wa as the leader again! We did create this!!! Would you care to hear Other ideas into Fixing this debacle you created... from the breeders who created the strains everyone is looking for?? Thank you... Until lawmakers realize... consumers don't appreciate chemical WEED... I turned my 502 licenses in!!! All you had to do is listen to experience... not book reading PHD wanna bees! AGAIN ... trying to teach you guys!!</p>	7/23/2019
Email	John Kingsbury	None provided	Action limits	<p>Clearing measurable changes through DOH. What adhering to the law might look like from my point of view (assuming that LCB makes the claim that their rulemaking claim has made medical product obsolete) would be that any changes to contaminant action levels be cleared through DOH. [As a historical note, DOH actually recommended lower action levels initially].</p>	4/11/2019
Email/Feedback Doc	Cannabis Alliance	N/A	Advisory Committee	<p>The recommended course of action for proposed rules is to address the multitude of complicated issues through review by a formal advisory committee. (a) The Advisory Committee is not just another workgroup but comprised of a broad range of educated professionals specifically created to advise the agency on policy. (b) Outcomes and/or recommendations of the Advisory Committee are to be adopted by WSLCB or DOE, and if not, heavily considered or required written board response before being discarded. (c) Areas of concern already identified that should be addressed by the Advisory Committee are called out in multiple sections below [referring to document].</p>	4/9/2019
Email/Feedback Doc	Cannabis Alliance	N/A	Advisory Committee	<p>Advisory Committee topics. The need for an Advisory Committee to review specific topic areas and make recommendations. A. sampling. All aspects; B. Limits of Detection (LOD's) and Limits of Qualification (LOQ's); C. Proficiency testing; D. Cannabinoid Testing, reporting recommendations (significant figures vs. range), and examination of requirements for all required tests or additions to currently required battery; E. "Batch" definition. Homogenization of batch needs to be examined. I.e. Different extraction runs may have different pesticide loads and incomplete blending will lead to non-representative samples and non-homogenous 'batches.'" F. Additive Testing/Requirements, including Terpenes; G. Timeline/Phase in; H. Recalls. Recall protocol and expectations should be defined, clearly articulated and enforced. I. WSDA Contract and the agency's future rule in QA testing. Random testing. J. Address Cost efficiencies. Make the cost of testing meaningful.</p>	4/9/2019
Email	Crystal Oliver/WSIA	N/A	Advisory Committee	<p>Several labs testified that a workgroup should be established to further vet this section of regulations. In the event that such a workgroup is formed it must absolutely include farmers.</p>	4/10/2019
Email/Feedback Doc	J. Burns, Treeline Analytics	N/A	Random sampling	<p>Sampling of all products is unnecessary to achieve the goal of protecting the public from pesticides. This can be achieved by farm level sampling in association with random sampling of packaged product. As of Feb 2019, data from the Uncle Ike's OK testing program shows ~8% of tested samples fail for pesticides, suggesting that pesticide contamination is not a significant problem to warrant testing at the product level. Consumer protection could be achieved by following methods similar to the ones the USDA/FDA conducts on food.</p>	4/5/2019
Email/Feedback Doc	Amy Trudeau/WoW Industries	N/A	Cost	<p>The higher the potency the more money you can ask for the product. In the early stages of the industry, you could sell a 1-gram concentrate for \$16 - \$18. Now, sadly we have to bicker with retailers and be price-bashed just in order to make the sale. That 1-gram concentrate now goes out the door for \$4 - \$8.33. The cost of labor to produce the concentrate hasn't gone down nor has the cost of electricity, nutrients, insurance and packaging just to name a few expenses.</p>	4/5/2019
Email	Crystal Oliver/WSIA	N/A	Cost	<p>We remain concerned about the lack of competition in testing labs offering heavy metal & pesticide testing. Lack of competition in the insurance space has led to significant increases each year and we fear the same thing will happen when it comes to increased testing requirements.</p>	4/10/2019
Email	John Kingsbury	None provided	Concentrates	<p>Concentrates. Secondly, I wanted to make you aware that I have been exploring legislation with a couple of legislators for a few months. It has been a learning experience for me. It is a technical subject. As I am sure you are aware, besides being a traceability hole, concentrates have, in some cases become a waste dump for contaminated plant material. This seems like a good time to address that issue. Unfortunately, I do not have</p>	4/11/2019

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				enough confidence in LCB's processes yet that I trust addressing concentrates can happen strictly through rulemaking and without legislative guardrails. Still, this seems like a subject that should be addressed now.	
Email	Matt Heist/Green Grower Labs	N/A	Cost	Our greatest concern involves any regulatory actions taken before the impending standardization of testing by the Department of Ecology. Any requirements before that time that would involve the purchase of equipment approaching a million dollars, could put labs in a potentially devastating financial situation. For example, in our research, manufacturers of the lab equipment assure us that all pesticides can be tested using their top of the line liquid mass spec. On the other hand, the WA dept of AG, who currently tests cannabis pesticides, has recited in an email that a liquid AND a gas mass spec are required. This means labs could spend up to 600 thousand dollars on a liquid mass spec only to find out a year or two later after standardization is created by the department of ecology, that another 200 hundred thousand dollar investment in a gas mass spec may suddenly be required. The financial burden may cause labs to exit cannabis testing and decrease competition, especially considering the current banking environment and challenges of financing such a significant sum of money. If the proposal to only test pesticides and heavy metals is on a "per harvest" basis, then a concise definition would have to be developed. If the requirements for pesticide testing are minimal as in only "once par harvest", then most labs couldn't invest in the testing equipment. This could create a severe back log of product going to market	4/10/2019
Email	Jed Haney	N/A	Cost	I wanted to follow up on the remarks I was making during the beginning of the meeting concerning the current rulemaking timeline. I am alarmed to hear that you are proposing to push the CR 102 to this fall with the assumption that these rules will be implemented by Jan 2020. Please allow me to explain. Two things - First, this shifting timeline is not healthy for any standard of business. We started preparing for mandatory pesticides when you initially announced the product intent. Second, this extended timeline is not good for the laboratories because we will have to take up rulemaking again post the recommendations from the Cannabis Science Task Force that will be delivered to the legislature by 07/01/2020, which will include agency recommendations for pesticide analysis. Having an extended rulemaking is not appropriate because we can assume that the next phase of rulemaking will be predicated on a platform of interagency recommendations developed through a robust scientific process with the Department of Ecology. As I am sure you have seen this amendment I will not belabor on the details. I would like to emphasize that we need time to make the investments that you are prescribing to the industry. For example, each time the pesticide action limits are adjusted we must overhaul our internal methodology. This process can take up to 6-months to properly validate so if you are to create back to back rulemaking on these action limits then it means we can predict internal wasted energy. Further, the pesticide accreditation being administered by RJ Lee will likely have to be updated to reflect the recommendations from the Cannabis Science Task Force. Finally, I would like to bring up that if you extend this rulemaking to Jan. 2020 that will mean we will have been working on these rules for over 15 months by that time. Although we appreciate the extension of the rulemaking process to allow for more input to be considered it is not appropriate to have such a long rulemaking session only to anticipate opening up a rulemaking period on pesticides again within another 6 to 9 months. Please consider the above points prior to the Quarterly Meeting this next week. This rulemaking timeline is a priority concern of ours.	4/11/2019
Email	John Kingsbury	N/A	DOH compliant product	I think we can all agree that the implementation of medical cannabis by LCB has been disappointing at best so far. This process could be an opportunity to recover that rather damaging fumble. With regard to that, I want to make the comment that, even if LCB intends to make the claim that testing makes a "medical" category obsolete, LCB is still bound by the law to check with DOH about whether the categories of products that LCB is declares 'benefiting the needs' in fact does that in the view of DOH. [per RCW 69.50.375 (4)] I think you should document that process in a transparent way.	4/11/2019
Email	Danielle Rossellison/Traillblazin' Productions	N/A	DOH compliant product	I've heard the LCB talk a couple times about possibly getting rid of DOH "General Use" (I realize that this is a DOH issue as well). As a producer/processor who has been actively marketing our product as DOH "General Use" Compliant for a year now, I am hoping we can keep the logo and just adjust the requirements. I would hate to see those of us who have invested time and energy to market DOH Compliant product, be punished by getting rid of the "General Use" logo. I am all for raising the pesticide and heavy metal standards of all recreational product, but I think it's important we still have the ability to differentiate product that is exceptionally "clean" or "medical grade". Perhaps lower levels for bile? Perhaps required terpene tests? Lower levels for residual solvents (500ppm instead of 5000ppm)? I am open to other ideas as well. My biggest concern is that we don't inadvertently hinder those companies who have worked tirelessly to promote DOH "General Use" products and who have meeting DOH standards, putting public safety at the forefront of their business' mission.	3/20/2019

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Email	Shawn Denaë	N/A	Emergency Rules = YES	<p>Mandatory testing of batches of concentrates – EMERGENCY RULE to protect public safety: test all brands currently on the shelves. Use the DOA lab for the purpose. If brands test hot, the fines will easily cover the cost of the test and I would wager enough will be hot that the program will be self-funded.</p> <p>a. Concentrates are the 'Go-to' for patients and the cheapest way for young folks to get a jolt of THC. Let's make sure they are clean. b. While the flower may have been grown responsibly enough, even the slightest presence of P/HM will concentrate in extractions.</p> <p>c. There are fewer extractors than growers so it will effect fewer licensees.</p> <p>d. Processors will continue to increase their requirements for clean tested bulk product; organically cleaning up the industry without over-reaching regulations.</p> <p>e. Bulk material that does not pass muster for Usable Marijuana (pesticides taste awful in flower and makes folks cough) is most often used for extractions. It is possible to buy processed, packaged, QA tested, distributed and taxed oils (concentrates) for less than \$10/g with THC levels at over 70% encouraging over consumption and risking people's health.</p> <p>f. Allowing for untested concentrates is setting up the State for future adverse health lawsuits. Best to CYA on this one with scientific testing requirements!</p>	6/21/2019
email	Shawn Denaë	N/A	Extend CR-102	<p>Extend the CR102 to allow time for all suggestions to be considered.</p> <p>a. This is the most vital rule change to date and we have had no rules coordinator (to my knowledge) in place during the final weeks of the CR101. Many conversations with Joanna are now lost to the process. More time needs given to discuss all ideas presented to the new or interim rules coordinator.</p> <p>b. Having the CR101 deadline on October 24th and presenting the CR102 just 5 business days later does not give ample time to consider all submissions. It indicates that the CR 102 is practically ready to finalize now. Please extend the CR 102 deadline to allow time to absorb, research, discuss and create rules that take into consideration all inputs vs coming out with a CR102 prematurely.</p>	6/21/2019
Email/Feedback Doc	Cannabis Alliance	N/A	Functioning traceability	<p>A functioning traceability system is critical to the success of a viable testing program. Until adequate and transparent traceability can be created and/or addressed (LEAF system actually functioning or replaced), many of the aspects of quality assurance testing such as representative sampling, chain of custody and legal defensibility of results are compromised and/or unenforceable.</p>	4/9/2019
Email	Crystal Oliver/WSIA	N/A	Packaging and Labeling	<p>The Lab Guild Commented that they wanted harvest date added back on to packaging. We are vehemently opposed to this. WSIA worked with Joanna for years to have it removed as it had a disproportionately negative impact on sungrown farmers ability to sell their product and its inclusion was not supported by any public health concerns. We are required to include the lot # on packaging which provides ample information for identifying product in the event of a recall.</p>	4/10/2019
Email	Danielle Rosellison	N/A	DOH compliant product	<p>One other thing I thought of. Companies using the DOH Compliant logo should be targeted as well. The LCB needs to make sure that companies using the logo are actually doing the required testing. Right now with traceability, there is no way to tell.</p> <p>I am particularly concerned with concentrates and companies adding additives to their products. I know the rules state you have to pesticide and heavy metal test imported CBD, but how would the LCB ever know if a company imported CBD? There needs to be a clear path forward to enforce DOH products.</p> <p>I think adult use concentrates are the priority right now because it's going to have the most effect on the entire industry. Once the industry is scarred straight (since that affects public safety for the most people), then move on to DOH.</p> <p>I realize that might sound self-serving, and you guys are MORE than welcome to test Trail Blazin any time you want, but there needs to be a clear path to make sure that DOH products meet the requirements. It's too easy for anyone to use the DOH logo and just say it's been tested. And since most stores don't know what the logo means, they don't know that additional testing is required or that they should ask for it.</p> <p>We've also seen companies test the cannabinoids concentrate, but not the end product...which includes additives, terpenes, imported CBD and a host of other things.</p> <p>I don't know what the solution is to this yet, but LCB Enforcement should be thinking of a plan.</p> <p>Last thing...which I forgot to mention in my document...it needs to be against the rules to SELL products that have illegal amounts of pesticides in them. We need to hold all licensees accountable, not just the farmers, so that there is an incentive by the processor and retailer to make sure they are purchasing and distributing clean product. Is this section of the WAC open?</p>	5/31/2019
Email	Noe Ramirez	N/A	N/A	<p>"The production of the crop has a lot to do since the product is chosen for which a production objective has been set because the variety of plants and products that are appreciated to produce the alkaloid and of what quality. I was a producer in Mexico for my own consumption, however the environment and the pH conditions in the soil and water as well as the insecticides and pesticides depending on the variety define what the result will be. I am at your service for any comment or inquiry."</p>	6/20/2019
Email	James Dusek/James Downtown CC	N/A	Negative Impact	<p>There are so many problems with the current rules for producers that are the reason Washington is the absolute worst state to produce Cannabis. All of the power is in the hands of the retailers. A new trend is retailers are wanting to return old product because they say it didn't sell. This is ridiculous they need to manage their inventory but if we don't accept the return and provide a credit or replacement as demanded we risk getting</p>	4/9/2019

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				blacklisted and the retailers won't buy from us anymore. Tier 3 grows should be charged by the square foot for their licenses or eliminated altogether. The fact that my small tier 2 pays the same as a 30,000 for grow is insane. Small producers need a craft outlet to sell their products direct to the public. The system is broken, large grows have retail licenses through family and hidden business deals. Retailers have hidden investments in producers and the small guys that follow the rules are getting pushed out. Less testing for producers that have a track record of passing tests. Allowing producers to have 3 licenses was a terrible decision and should be reversed. This is a major factor contributing to the overproduction problem that the WSLCB and the legislature refuse to do anything about. Allowing stores to have more and more retail licenses is extremely damaging to the market. It's been five years and its time we make some changes before all of the original licensees are pushed out.	
Email	Crystal Oliver/WSIA	N/A	Negative Impact	The farmers cannot support ANY additional increases in operating expenses. We have been getting squeezed for 5 year straight. If local, state, & federal taxation was different, if we didn't have to pay extra for everything else we need such as banking & insurance we might feel differently but given the reality of most farms financials we cannot bear another increase in testing costs. Last time there was a change in testing standards the farmers saw a 50% increase in testing costs which wasn't correctly anticipated in the SBEIS that was done at that time. I'm not sure that labs can be relied upon to provide an accurate estimate of the increase in testing costs to the farmers, I also know that there is pending legislation related to DOE certification of labs which includes assessment of a fee on labs to fund it. I am confident that this fee increase will be passed down to farmers and want to make sure we take that reality into consideration as well.	4/10/19
Email	Mark Ambler/TiPA	N/A	Negative Impact	WAC 314-55-075(6) requires that a Tier 1 Producer grows less than 2,000 ft of cannabis which is 5X less than Tier 2 Producers (10,000 ft) and 15X less than Tier 3 Producers (30,000 ft.) In 2018, 46.7% of Tier 1 Producers (63 out of 135 surveyed) left their farms lay fallow, many stating economic reasons. We are almost at the LD50. This means many of us had no revenue in 2018. This regulation would <u>not</u> be a minor cost to us. We are not like normal small businesses. Our access to capital is severely limited. We can't claim bankruptcy when we fail. We spend significant time self auditing, getting inspected, and tracking exact pesticide and fertilizer use at our secure facilities. Each of our Tier 1 Farmers carry product liability insurance in case there ever is an issue. Implementing a drag net cannabis sampling program would result in massive collateral damage to our industry. For our Tier 1 Producers to compete on a global scale with billion dollar publicly traded companies, we can't be forced to spend an extra \$0.116/gram on tests that aren't aligned with our foreign customer's local laws. Thank you for considering Washington's Small Cannabis Farmers. We are dying and need your help.	
Email	silence30924	N/A	Negative producer impact	I own a 502 producer/processor and I just heard that there is discussion about adding mandatory heavy metal and pesticide testing for every 5-pound lot of product. Well, if you want to finish the job of driving the small growers out of business, by all means proceed with the least cost-effective way of dealing with this "problem." The same effects can be obtained from a random testing program or from allowing harvest-sized batches, but hell, all those small growers are raking in the money, so they are ripe for a little more squeezing, right? And by the way, do you know how many people have been killed by "contaminated" weed worldwide in the history of man? Zero. Do you know how many have been sickened? Zero confirmed. Good thing you are addressing this problem! I feel safer already!	4/15/2019
Email	Craft Cannabis Washington Farmer/TiPA/Mark Ambler	N/A	Negative producer impact	Your messaging is fine. We're more concerned that the Labs and Industry groups were notified with ample time to prepare and we were notified the day of the meeting. We are also concerned about the risk of this scenario: 1. Producer A grows cannabis and supplies that recreational product to the market. 2. WSDA and LCB tells the public we're cleaning up recreational marijuana for medical patients. 3. Consumer A has a father with stage 4 cancer and heard that cannabis cures cancer and now his store is selling fully tested product. 4. Consumer A gives his father recreational cannabis and he dies In this scenario the recreational cannabis Producer would likely be sued by the Consumer's family although they never intended for sick people to use their product. Presenting these rule changes as exposure risk reduction is dangerous to the public. We propose to set a much, much, much higher bar for medical cannabis and leave recreational cannabis to consumers healthy enough to handle the intense mental and physical effects of the product. For medical, if we want our products in hospitals where they can be prescribed by Doctors, not budtenders, we need to follow the same process the pharmaceutical industry uses. These rule changes may be what labs and large producers with 10's of thousands of pounds of stockpiled medical cannabis want, but us small farmers who are struggling to keep the lights on can't afford it. Please help us.	4/18/2019
Email	Craft Cannabis Washington Farmer/TiPA/Mark Ambler	N/A	Negative producer impact	We are concerned that the board may have been lead to believe producers overwhelmingly support this rule proposal. We conducted a phone survey of Tier 1 Producers and 90% of them answered no to the following question: "Do you think that producers should be required to test all marijuana flower for pesticides and heavy	4/19/2019

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				metals?" Meanwhile, we noticed several surveys published by pay-to-join industry groups which didn't even ask that simple question. These are industry groups with laboratory representatives on their boards, led by large producers who are stockpiling 10's of thousands of pounds of medical marijuana. They may lead you to believe our greatest concern is 5 lb. vs. 10 lb. lots. Please give us an opportunity to speak on this issue in person. We're counting on all of you to give us a voice and let us be heard. Let's travel through this time of change together. Don't let the Tier 1 Producer die in silence. Help us.	
Email	Kelly Martineau/Chick Barn Farms (Tier 1)	N/A	Negative producer impact Heavy metals screening = NO Pesticide screening = NO	I am writing to ask that we put this on the back burner for now. Now that Hemp is legal in the United states we will start to see pesticides for hemp crops....hemp and cannabis are the same plant. Many of the allowed pesticides are allowed under a work around as the EPA would not register something for cannabis (hemp) because it WAS legal. I would like to see how this changes now that hemp will most likely be a crop listed on EPA registered pesticides. We need to wait. In addition to the above, as a very small tier one, I absolutely cannot afford these proposed rules. Lower the licensing fee for tier ones, as we do not use as many of the LCB's resources, these rules are ruining the family farms, a concern and the just of the passed i502 in the first place.	4/16/2019
email	Shawn Denae	N/A	Packaging and Labeling	Require that claims of "Pesticide Free" or "Clean Green" or any other indication the product is clean on packaging be backed up with tests available to the consumer. These changes will draw patients to i502 as they were drawn to stores prior to regulation!	6/21/2019
Email	Shawn Denae	N/A	Packaging and Labeling	Require ingredients to be listed on the package: a. This is a no-brainer; processors are cutting cannabis oil with non-native substances, yet the consumer is led to believe their purchase is 100% cannabis derived. (Particularly in the vape cartridge market.) b. Many industries require this so it is more common than uncommon and provides further consumer protection. c. Vape products are being laden with non-cannabis flavors that appeal to kids (fruity flavors like watermelon and strawberry) These flavorings are NOT approved for inhalation! If this agency does not wish to get in the way of industry (consumers LOVE these fruity flavors) then at the very least require the ingredients on the package and let the consumer be informed they are buying additives. d. Only products with native terpenes, naturally balanced cannabinoids and no adulteration can claim 100% cannabis.	6/21/2019
Email	Bob Ramstad, Paradoxical, dba Oz	N/A	Published test results	Hi there, I own and operate OZ, a medium sized cannabis retailer in the Fremont neighborhood of Seattle. I understand there are some forums and discussions going on regarding upcoming rulemaking on Quality Assurance Testing for cannabis. I don't have an email for Kathy Hoffman so thought I'd send my feedback here. It is essential that the state take control of the actual lab results for product lots. It is impossible for me as a retailer to know for sure if a CoA provided to me by a processor is in fact legitimate. There is no way for me to know if it has been altered or reused. It is also not possible for me to even know if a given child lot sold to me actually matches a given parent lot that the processor claims it is from. The simple fix is that the LAB should provide the required TEST RESULTS directly to the STATE along with the parent lot. The STATE should then allow ALL parties, including the public, access to all the results in the system. Beyond that, the state should allow for easy lookup of a child lot to find the parent lot and all the test results associated with the parent lot. This gateway should be available to the public. IMHO this is the only sensible approach given that we're moving in a direction of pesticide testing and heavy metal testing as well as potency... people deserve to know what is in the product they are consuming, and we need a neutral third party, public facing, to warehouse and provide those results to everyone. (The other alternative is to make the labs host the test results, but again, that seems like a bad idea, as the labs could modify records over time and that would be hard to catch... if the lab provides the result to the state in a one shot, and the state then houses the results and lets people look at them, anyone who wants, it's impossible for the lab to alter the results after the fact.) I think this would go a long way towards greater confidence in the state 502 system, especially for medical patients. Thank you for taking this suggestion into consideration.	4/4/2019
Email/Feedback Doc	J. Burns, Treeline Analytics	N/A	Random sampling of packaged product	Packaged product collected from producers/processors before shipping to retain [retail] outlets to maintain chain of custody. Retail sampling could be added but chain of custody may be more difficult to maintain. These samples will test for banned pesticides and determine that approved pesticides are below action limits. Random sampling would allow for a data base to be generated that could be analyzed by a workgroup or a third party to determine the ability of labs to detect pesticides in the cannabis matrix. This would allow for the accurate determination of appropriate action levels. It would also provide information on frequency of false negatives and positives.	4/5/2019
Email/Feedback Doc	J. Burns, Treeline Analytics	N/A	Random sampling of producers	Soil, plants, hydroponic system, spraying equipment. These tests would help detect banned pesticides. Processors/producers would pay a predetermined licensing fee equivalent to the cost of testing; or producers/processors would pay testing lab directly. Samples could be processed by state or certified lab.	4/5/2019
Email	Matt Heist/Green Grower Labs	N/A	Rule Proposal Approach	We do wholeheartedly thank you for your measured approach in new rule proposals. Past rule implementation was a bit alarming in regard to short timelines in which to fulfill the requirements under said rules.	4/9/2019

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Email	James Shults	N/A	Rule Proposal Approach	This is James Shults, we met yesterday at the marijuana listen/learn/comment work session. I wanted to thank you for the presentation and for creating such an inviting and interactive work session. I've worked in Washington's recreational cannabis industry for a number of years, first in a certified analytical lab and more recently for producer/processors, and I can honestly say this is the most optimistic I have been about LCB involvement and willingness to elicit meaningful input from stakeholders. This optimism is a direct result of your presentation and my impression that you're willing to put in the extra work at the beginning so we can create real solutions for the industry by the time rules are made real. Thank you again for your presentation and I look forward to more in the future.	4/10/2019
Email	Jed Haney	N/A	Rule Proposal Approach Cost Quality of forum comment Exclude all but lab owners and scientists from rule development	Kathy, this email shall serve as our initial response as we prepare our formal remarks to the Listen and Learn Forum. I would like to note that I appreciated this style of information gathering. It serves to create a dialogue that is not generally experienced in moments of public testimony. The team including Debbe did a great job managing the meeting. My only critic is that you had non-scientists packing a room making policy recommendations that are not vetted through any significant process. Some of these suggestions were so out in left field, so to speak, that myself and others were frustrated that we didn't have the time to respond to them. The majority of their remarks are based on the market economic situation that we find ourselves in, which is called the "race to the bottom." Currently, the wholesale market has tanked to sub .20 cents per gram (I have reports down to .02 cents per gram) so you can expect economic concerns from the producers and processors, concerns that are resolved by enforcement of current rules such as the restrictions of sales below the true value of production. What you did was create a room full of stakeholders that are competing for a fraction of the margin of profit that is left in the wholesale sector, therefore, you diminished the voices of the labs. In other words, the labs take a risk when calling out for greater standards that will cost our customers money, even if these suggestions are based on ASTM approved standards. You will note that not all of the labs showed up and out of the ones that did not very many of them spoke up. Please consider hosting closed stakeholder meeting/forum to collect the opinions and suggestions of the owners and scientists that represent these labs without them potentially feeling intimidated by speaking up in front of their customers.	4/11/2019
Email/Feedback Doc	Cannabis Alliance	N/A	Rules phase in Contract WSDA	a. What phase-in timing works for balancing board vs. business needs? The advisory committee will be critical in helping the board understand this. b. Does the new language effectively remove any difference between "medically compliant" and regular adult-legal products? What are the implications for laws currently addressing this and bills being considered? c. What is occurring with the WSDA contract to sample products and test for pesticides? How does that relationship between the agencies factor into the decisions being made for overall QA Testing?	4/9/2019
Email	Fred Brader/Orgrow LLC	None provided, but comments speak generally to WAC 314-55-095 Marijuana servings and transaction limits	Serving size limits	Serving Size limits: Please consider changing the serving size limits of Marijuana Infused Products to 7 gr. from one gram to distinguish it from a Marijuana Concentrate which can have a THC content percentage of 60-95%. Concentrates are much higher in THC than Marijuana Infused products which are typically in the range of 30-45% Total Cannabinoids. There should be consideration for marijuana infused products to have serving size limits closer to marijuana for inhalation which can carry total cannabinoids close to 30% by themselves. Listed below are some excerpts from the rules. (y) "Marijuana concentrates" means products consisting wholly or in part of the resin extracted from any part of the plant Cannabis and having a THC concentration greater than ten percent. The definition of a Marijuana-infused product per RCW 69.50.101: (ee) "Marijuana-infused products" means products that contain marijuana or marijuana extracts, are intended for human use, are derived from marijuana as defined in subsection (x) of this section, and have a THC concentration no greater than ten percent. The term "marijuana-infused products" does not include either useable marijuana or marijuana concentrates.	4/15/2019
Email/Feedback Doc	Cannabis Alliance	N/A	Small Business Impact Statement (SBIS) or Economic Impact Statement (EIS)	Small Business Impact Statement (SBIS) or Economic Impact Statement (EIS) must be done for processors/producers (P/P) and labs. A. Changing the structure of sampling and tests changes the financial burden on P/P and ultimately will factor into business closures or increased consumer prices. B. Recommend timeline for phasing in new testing requirements be stepped and gradual to reduce large bottlenecks in testing and prevent P/P's from holding large amounts of high-value inventory waiting for test results.	4/9/2019
Email/Feedback Doc	Amy Trudeau/WoW Industries	N/A	Standardized testing Negative producer impact Increased costs	I have been in the industry since September of 2014. In my opinion, the single major problem with the cannabis quality assurance testing is that DIFFERENT LABS RENDER DIFFERENT RESULTS! You need to do away with ALL of the fuss and regulations in "trying" to police and ensure that all testing labs are doing the same testing but with different equipment and different procedures. It clearly has been a fail. It hasn't worked, and, what it has done is create an industry on number-driven results. Let us not forget all the revenues our industry has brought in to the state of Washington through taxes, licensing and permitting with which we get hit at every level: state, county, and city which squeezes any profit from already struggling farms. Simply, the industry needs to change! First start by awarding a state contract to ONE testing laboratory for ALL quality assurance testing. Then how could any of us dispute this? I believe you would see a stabilization of pricing and perhaps an increase. There would be a lot less fishing for potency and jumping ship from lab to lab to get this week's highest testing results! If the industry is going to require all this testing, it needs to reflect that in the sale price of the concentrates. More testing costs more money! Again, the sale price of our concentrate has been reduced to a price that can't be sustained. Please hear us and make the changes necessary for us to thrive. We need more education and	4/5/2019

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				encouragement and less punishment from the WSLCB. We are legitimate business people supporting numerous families in this young, complex and competitive industry. Give us a hand up!	
Email	Bob Ramstad	N/A	Test Results	As a retailer, I am very concerned by the fact that I get lab results from the processor. I should be getting them from the lab. Otherwise it's way too easy for a processor to alter or falsify lab results, which completely negates any public safety element from having required tests in the first place. It's even worse when you factor in pesticide or heavy metal testing that might require that a crop be destroyed. It's one thing if a processor is changing 14% THC to 24% THC by editing the PDF or using white out on a document and then taking pictures of an altered document... the public may be defrauded, but they aren't being put in danger. When we talk about pesticides and heavy metals, a failed test might mean that the product is dangerous.	6/24/2019
Email	Bob Ramstad	N/A	Test Results	Beyond that, I would argue that since testing for potency and contaminants is required by law before product can be sold to the public, and the public can request review of the results when at a retailer, that it would make sense to declare the test results to be public and require that they be available to the public -- either on an LCB server, or made public by the lab itself. Anyhow, that's my main point. It's ridiculous that processors and labs treat the lab results as if they were trade secrets, private, unable to be viewed by anyone. If I ask a lab for a result -- because I think it may be tampered with, or because the processor doesn't have it handy -- the lab almost always either tells me to get it from the processor OR they require the permission of the processor to disclose it to me. That's wrong. It's going to be super wrong if there are 3x as many documents floating around. Note that having all this stuff available via the web is also patient friendly as many of them have limited mobility and it's ridiculous to expect them to come to a shop in order to see test results. We should be able to give them lot identifiers via text or email and they should be able to review lab results from the privacy of their own home. I hope you will seriously consider making lab results public, indexed, and searchable, as a cornerstone of the next revision of this portion of the WAC. It'll simplify things for labs, producers, processors, customers, patients, and retailers. The results should be able to be retrieved by using a child lot, a parent lot, the identifier of the lab sample, and the lab result identifier. I personally think this is more important than traceability. I think the LCB should build a small lightweight system where the labs can send in a PDF with results, and indicate what lot identifiers it applies to, and then the LCB retains that information permanently and can return it when queried on the web or via an API, but if the LCB doesn't want to build this system, they certainly can force labs to provide this functionality.	6/24/2019
Email	Joe Rammell	N/A	Costs	I was reviewing your comments in the observer, and I'm confused about your statement that "testing would triple costs for the growers". We are testing products for pesticide and metals, and it only costs us \$60 extra. We get our pesticide testing for free from confidence analytics, and send the metals to the other lab that does metals. In doing a little digging I am finding the people pushing back on this are the large growers, because in addition to the testing, they would have to change their growing habits. Organic is more expensive than spraying. The other group is the small grower who perceives the expense based on the old scenario of costs. It is true that because the small growers have more small lots, it hits them disproportionately, but we purchase from several partner growers, and we do the testing. Because of our volume, we can also tests theirs for \$60. By setting up harvests to just be 1 or 2 strains per harvest, so metals costs are further mitigated. I wonder if the participants in your work group are truly indicative of the general industry. I know a lot of growers who are testing for pesticide for marketing reasons as well as it's the right thing to do. We are now successfully remediating concentrate, so the argument that you can't produce clean concentrates, doesn't hold water. Plus if all the flower is tested, many times the oil will be clean as well.	6/26/2019
Email	Dan Moen	N/A	Total Living Organic System	WOW... A real answer, Maybe you are starting to see, the future is in jeopardy... Ok, cultivation of Cannabis is very Easy!! The model you seek, is Live Soil in a TLO Total Living Organic system! Basically, modified Korean/Japanese Symbiotics. This incorporates soil that only thrives on conditioned water! ALL nutrients and bio chemistry for the plant, is created and maintained within the soil beds! In TLO style grows, the micronizes TALK to each other thru roots and with soil frequency and vibration! In this system, I use Various Other plants in symbiotics, to achieve Maximum perfect soil conditions !! In this system, ALL the plant needs, are in the Soil... What is interesting, in this system, when established, eliminates waste thru non movement of chemical Dirt, in present systems. Non disposal of cultivation mediums... This system can also be developed in a Hydro like style, BUT, in this application, Genetics really start to matter!! As these groups are looking to establish a Cultivar for 'Standing Out', in this Law and regulation filled industry...	7/25/2019

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				<p>We are seeing, Hermie traits, not being bred out of the system!! In other words... pollen thats tainted, crosses in natural winds...are cross bred into already established Pure untainted cultivars. So now... These growers are stepping into genetic variances...NOT GOOD for Anyone!! This is why, grows are failing after months of growing, the plants are confused! So... Bottom line is this... IF the State does not implement a Total Chemical Free system...Mother Nature is going to be Pissed!! We will, and are seeing... Fails, Genetically and chemically...as cultivars are tainted. Chemicals being dumped into to environment, even under your camera watch... By the way... Do you really have enough workers or time to dissect, and Watch all that footage?? Nice thought, but these cultivators are smarter than that!!! So as a pioneer, who at 12, grew his first plant, under my parents house, I have seen first hand, Cannabis Adapt to the environment they are bred into... In other words...Cannabis thrives in Tropical settings...78-84 degrees. In our breeding programs that created this, we have taken decades to create cold weather cultivars, made for PNW. These cultivars are so tough, I can grow in Acid,Cedar soils, and shade! I have reached out to Numerous Cannabis labs, to incorporate these Future traits into genetics, only to be poo pooded as I have no Phd!! I laugh, as these Experts... lol... think this plant is like others!! Its funny when professors at UW ask me WHY their plants are failing...after their attitudes are.. We are Phds... we know it all!! The absolute Future of Cannabis... is going to Fail...BAD!! All these meetings, cant fix the Greed aspect this state has implemented in the 502 system... Sure your Russians are doing good... Sure, some create OK product, but still with chemicals..And, whoever says... We just FLUSH the chemicals out, before harvesting... Really has Zero clue... You just cant Flush a plant like that... it actually is opposite!! No... I will not attend these meetings, as I tried numerous times to open 502 law makers eyes... My mentor was asked to write the formula for the whole system, after he set Colorado up, but past leaders only think about retiring from the state!!! WE are DJ Short... Not the fedora wearing frauds, who have stolen our ideas... WE created this whole thing... in PERFECT F4 and above cultivars we released decades ago. Greed in 502, has created Fail!! Now... Chemical products have overwhelmed your market... Consumers will revert back to Black Market, as they have no other choice!! Do you enjoy tasting or feeling chemicals in your medicine?? Thats how We started this...The whole intention or our Lives in Cannabis development, has been... to heal Women's heal issues.. Period!! We recognized that Women are the most precious commodity... We recognized, at teen years, women's bodies change emotional and physically every 22 days...And all aspects of Women are flawed in that aspect. We love our women...and just wanted a better way to make these changes so frequent so its easier month to month!! I can rant n rave all day... We have gone back underground, and my genetics library put away... We will watch this whole thing Fail... then Validation into ...Exactly Who's Who, will finally slap those Phds in the face, and DNA will prove... my Genetics, that are so tough, will SQUASH ANY patient under me!! Sorry, but thu Greed and Failure... your ears did not listen... Your attitudes of... oh those stoners dont know shit...will come full circle!! The true History of Cannabis will then be set as FACT... Yes Dear... We are those guys, Ghosts and legends...the REAL DJ Short!! If you have read this far...Then Why didnt the state put ads in papers, saying... hey, we know of underground Cannabis grows going on... please come out and Teach us! No legal action against you... We as the state, are implementing a legal Cannabis industry... Please Teach Us!! FAIL from the start! You REALLY want to fix this industry... Wheres YOUR Cannabis ANYTHING resume? Ever grow a plant?? Start with this guy... KC Dochtermann...via LinkedIn He at 14, started marketing with Cannabis. He is Fully Qualified to be your Czar!!</p>	
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				Thank you. Dan Moen ALL Statements and content in this, and, ALL emails, are my Opinion only!	
Email	Shawn Denae	N/A	Weight Limits	Increase the weight limits for registered patients to lower the costs: a. Patients used to buy in bulk to make their own edibles according to their personal diets. They need clean cannabis in bulk now, too! b. We can bag up a quarter pound (4oz) of cannabis for considerably less than an ounce. c. Providing these weight limits are good for producer's bottom lines as patients do not typically judge their cannabis on THC and size of bud standards as recreational buyers tend to do. It is a valid way to move the B grad product to patients at a premium to what is being offered from extractors. This will reduce the enticement to divert! d. I recommend lifting the limit to a max 113grams=quarter lb. packages and allow patients to purchase up to 4 units (max. 1lb)	6/21/2019
Email	Crystal Oliver/WSIA	N/A	WSDA Testing	WSIA would prefer to see the WSDA empowered with more authority to educate, regulate, and enforce pesticide compliance by cannabis farmers. We are supportive of random farm inspections & sampling by the WSDA to address pesticide issues at the source. Through voluntary pesticide testing we have identified that there are issues with false positives as well as cross contamination at the processing level. As well as issues with traceability and accuracy of labeling by processors which have been uncovered by Unkle Ile's OK program.	4/10/2019
Email	Jed Haney	N/A		I wanted to drop this note to you to inform you that there seems to be a lot of interest in the upcoming meeting this week. I hope that you are prepared to have a room full of stakeholders as well as the laboratories. From what we are hearing there will be a lot of unhappy farmers showing up.	4/8/2019
Email	Daniel Solaro	N/A	WSDA Testing	I have read the april comments and agree their should be a WSDA contract that involves blind testing that is reasonable and in keeping with their protocols for other ag products. The labs will argue for smaller lots and more tests because it generates revenue for them. The testing should minimized to achieve realistic goals and encourage voluntary compliance among industry members. Do we require an owner of a winery to test every 5 gallons out of a 1000 gallon production run? Are breakfast cereals, which are not burned - and go directly into our intestines, tested in five pound lots? Consult with WSDA scientists and have them come up with a reasonable protocol. For those hypochondriac germaphobes that just cant trust normal food quality protocols, there is always another option. Use some of the money the State is making and provide every processor with irradiation equipment. https://www.fda.gov/food/buy-store-serve-safe-food/food-irradiation-what-you-need-know	4/9/2019

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PROPOSED RULE MAKING



CR-102 (December 2017) (Implements RCW 34.05.320)

Do **NOT** use for expedited rule making

Agency: Washington State Liquor and Cannabis Board

Original Notice

Supplemental Notice to WSR _____

Continuance of WSR _____

Preproposal Statement of Inquiry was filed as WSR 18-17-041 ; or

Expedited Rule Making--Proposed notice was filed as WSR _____; or

Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or

Proposal is exempt under RCW _____.

Title of rule and other identifying information: (describe subject) WAC 314-55-101 – Quality assurance sampling protocols; WAC 314-55-102 – Quality assurance testing (effective until February 28, 2021); New Section WAC 314-55-1021 – Quality Assurance and Quality Control (Effective March 1, 2021 until August 31, 2021; New Section WAC 314-55-1022 – Quality Assurance and Quality Control (Effective September 1, 2021); and WAC 314-55-1025 – Proficiency testing. The Washington State Liquor and Cannabis Board (Board) proposes amendments and new sections to current marijuana product testing standards that would require the addition of pesticide and heavy metal testing for all marijuana products produced, processed, and sold in Washington State.

Hearing location(s):

Date: **Time:** **Location:** (be specific) **Comment:**

Date:	Time:	Location:	Comment:
July 8, 2020	10:00 am	1025 Union Avenue, Olympia, WA 98501	

Date of intended adoption: On or After August 5, 2020 (Note: This is **NOT** the **effective** date)

Submit written comments to:

Name: Katherine Hoffman

Address: 1025 Union Avenue, Olympia, WA 98501

Email: rules@lcb.wa.gov

Fax: 360-664-9689

Other:

By (date) July 8, 2020

Assistance for persons with disabilities:

Contact Claris Nhanabu, ADA Coordinator, Human Resources

Phone: 360-664-1642

Fax: 360-664-9689

TTY: 7-1-1 or 1-800-833-6388

Email: Claris.Nhanabu@lcb.wa.gov

Other:

By (date) June 24, 2020

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The proposed rule amendments revise and update current marijuana quality assurance sampling protocols described in WAC 314-55-101, and marijuana proficiency testing described in WAC 314-55-1025.

This proposal also provides that as of September 2021, in addition to the currently required suite of tests, all marijuana products produced, processed, and sold in Washington State be tested for pesticides and heavy metals. This is accomplished by revising and updating existing WAC 314-55-102 by way of a phase-in plan, as follows:

- The first proposed revisions, if adopted, would be effective until February 28, 2021.

- On March 1, 2021, WAC 314-55-102 would be repealed, and WAC 314-55-1021 would become effective until August 31, 2021, adding pesticide testing to the current suite of required product testing for all marijuana products produced and sold in Washington State.
- Finally, on September 1, 2021, WAC 314-55-1021 would be repealed, and WAC 314-55-1022 would become effective, requiring both pesticides *and* heavy metals to the current suite of required product testing for all marijuana products produced and sold in Washington State.

As a technical matter, this proposal renames and more appropriately refers to marijuana *quality control* sampling protocols and marijuana *quality control* and assurance testing standards. While quality control is a set of activities designed to evaluate a product, quality assurance pertains to activities that are designed to ensure that a *process* is adequate and the system meets its objectives. In contrast, quality control focuses on finding defects or anomalies in a product or deliverable, and checks whether defined requirements are the right requirements. Testing is one example of a quality control activity, but there are many more such activities that make up quality control. For these reasons, this proposal renames these sections.

Other proposed revisions include streamlined, clarified language; section reorganization to increase readability, along with reduction and removal of passive language where appropriate.

Reasons supporting proposal: Current testing requirements for recreational marijuana are intended to ensure that products for sale are safe and have accurate potency levels. However, Washington state recreational marijuana products are not required to be tested for pesticides and heavy metals, and although not precluded from doing so, many producers and processors do not test for either. Based on a number of elements, including consumer concern and national best practices, it has become evident that standardized testing for *all* marijuana products produced, processed, and sold in Washington State is necessary. Washington State is the only state with both recreational and medical programs that does not require such testing for all products.

There is no guidance available to the WSLCB or any other state agency regulating marijuana from federal agencies who set standards for agriculture, food, and other products because marijuana remains classified as a Schedule I drug, and federally illegal. This presents regulatory challenges to the WSLCB, regulators throughout the country, and the industry since there is limited funding to support research on how marijuana tainted with potential toxins affects humans. However, while the possible health impact of consuming marijuana products with unapproved pesticides is an emerging area of research, the overarching goal of the WSLCB is to protect public health and safety, and to assure that all products sold within the I-502 market are safe for all consumers.

Recently, concern around the composition and safety of marijuana concentrates for inhalation has highlighted the need to assure that all marijuana products are tested for the presence of harmful compounds and other contaminants. The proposed rule amendments and phase-in plan offer a reasonable time frame that provides both licensees and accredited labs the opportunity to adjust business models where necessary, and offers options to prepare for additional fields of testing either immediately or over an extended, but finite period of time.

Need for Withdrawal of Original CR 102 Proposal

On March 23, 2020, Governor Inslee issued the first Stay Home, Stay Health proclamation. Because there were no viable options for the Board to hold a public hearing that complied with the Stay Home, Stay Health proclamation and subsequent updates, the Board was unable to hold a public hearing on the proposed rules on April 1, 2020. On March 27, 2020, and consistent with RCW 34.05.335 and WAC 1-21-060, the Board withdrew its proposed rulemaking filed on March 11, 2020 as WSR 20-07-052 as a continuance of proposed rulemaking filed on January 22, 2020 as WSR 20-03-076.

The Board's intention in taking this action was to refile a new CR 102 regarding proposed marijuana quality control rules as soon as reasonably possible, and once virtual stakeholder engagement options became available. It was clearly articulated at the March 27 meeting that the Board was *not* redrafting rules for this project. The only change to the re-filed CR 102 rule package would be the hearing date, potentially the forum for the public hearing, and timelines regarding phase in. The purpose of the withdrawal was to merely place the project on pause until venue and method for holding a public hearing were solidified and available. The substance of the rule proposal would not change with the new filing, and has not changed.

Statutory authority for adoption: RCW 69.50.345 and RCW 69.50.348.

Statute being implemented: RCW 69.50.345 and RCW 69.50.348

Is rule necessary because of a:

Federal Law?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Federal Court Decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
State Court Decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

If yes, CITATION:

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: None

Name of proponent: (person or organization) Washington State Liquor and Cannabis Board

Private
 Public
 Governmental

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting: Rules Manager	Katherine Hoffman, Policy and	1025 Union Avenue, Olympia WA, 98501	360-664-1622
Implementation: Examiners Unit Manager	Kendra Hodgson, Marijuana	1025 Union Avenue, Olympia, WA. 98501	360-664-4555
Enforcement: Enforcement	Justin Nordhorn, Chief of	1025 Union Avenue, Olympia, WA, 98501	360-664-1726

Is a school district fiscal impact statement required under RCW 28A.305.135? Yes No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:
Address:
Phone:
Fax:
TTY:
Email:
Other:

Is a cost-benefit analysis required under RCW 34.05.328?

Yes: A preliminary cost-benefit analysis may be obtained by contacting:
Name: Katherine Hoffman
Address: 1025 Union Avenue, Olympia WA 98502
Phone: 360-664-1622
Fax: 360-664-9689
TTY:
Email: rules@lcb.wa.gov
Other:

No: Please explain:

Regulatory Fairness Act Cost Considerations for a Small Business Economic Impact Statement:

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.061 because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.
Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by RCW 34.05.313 before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of RCW 15.65.570(2) because it was adopted by a referendum.

- This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(3). Check all that apply:
- | | |
|---|--|
| <input type="checkbox"/> RCW 34.05.310 (4)(b)
(Internal government operations) | <input type="checkbox"/> RCW 34.05.310 (4)(e)
(Dictated by statute) |
| <input type="checkbox"/> RCW 34.05.310 (4)(c)
(Incorporation by reference) | <input type="checkbox"/> RCW 34.05.310 (4)(f)
(Set or adjust fees) |
| <input checked="" type="checkbox"/> RCW 34.05.310 (4)(d)
(Correct or clarify language) | <input type="checkbox"/> RCW 34.05.310 (4)(g)
((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |
- This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(4)(d): WAC 314-55-101; WAC 314-55-1025.
- Explanation of exemptions, if necessary:

COMPLETE THIS SECTION ONLY IF NO EXEMPTION APPLIES

If the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

- No Briefly summarize the agency’s analysis showing how costs were calculated.
- Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses, and a small business economic impact statement is required. Insert statement here:

What is the scope of the rule package?

Compliance with the proposed, specific requirements described WAC 314-55-102, WAC 314-55-1021, and WAC 314-55-1022 will likely result in additional compliance costs. This includes the incremental, phased-in requirement to test all marijuana products for pesticides and heavy metals. The remainder of the rule revisions are exempt.

Which businesses are impacted by the proposed rule package? What was their North American Industry Classification (NAICS) code or codes? What are their minor cost thresholds?

The NAICS code, business description, and minor cost thresholds are described and calculated below:

Type of Business	# of Businesses In Washington	Percentage of Businesses Considered Small ³	Average Annual Revenues ^{4,5}	Minor Cost Threshold (0.3% Average Annual Revenues)
Marijuana Producer, Processor	341 ¹	98%	\$1,418,224	\$4,255
Cannabis Testing Laboratory	14 ²	100%	\$1997000	\$5,990

Notes:
¹ Represents the number of Marijuana producer/processors that reported revenue, lab tests, and employment between 2018-05 and 2019-04
² Represents the number of labs certified to conduct testing on cannabis products in Washington State.
³ Defined as having 50 or fewer employees. Producer/processor employment information provided by the Employment Security Department for the 3rd quarter of 2018. Laboratory businesses employment determined through interviews with labs and LinkedIn business profiles accessed 2019-04 and 2020-01
⁴ Average annual revenues for producer/processors based on total sales divided by the number of business that reported sales, lab tests, and employment.
⁵ For testing laboratories, minor cost threshold based on average annual revenues from the 2010 Economic census of the U.S. for businesses in the “Testing Laboratories” category (NAICS 541380)(WA State Auditor’s Office 2019)

Does the rule have a disproportionate impact on small businesses?

In particular, in order to calculate annual costs, we require information on a per entity basis describing the number of samples being tested per year. While we have some limited anecdotal information on the numbers of samples tested per year by individual producer/processors, we lack information on the myriad business models that could lead to a wide range in the number of samples tested per year, and thus a wide range of per entity compliance costs per year. Developing reliable estimates would require a comprehensive survey with a *reasonable* response rate, and even then, given the wide variability of business models and documented inconsistency in responses from licensees, per entity costs is difficult to determine.

Did the agency make an effort to reduce the impact of the rule?

The proposed rule changes include provisions that are intended to reduce the compliance costs for small businesses. These include:

- An incremental phase-in period that contemplates full compliance by March, 2021; and
- Allowing labs to subcontract pesticide and heavy metals testing for a period of time.

It is difficult to accurately assess if small businesses will be disproportionately impacted by this rule proposal when there is both significant overlap and variance between the groups evaluated. As noted above, and throughout this SBEIS, most of the businesses impacted are small as defined by RCW 19.85.030.

Did the agency involve small businesses in the rule development process?

Throughout the rule development process, the WSLCB has engaged with businesses likely to be affected by the rule, and who volunteered to participate in the process. To support development of the SBEIS, a subset of six producer/processors spanning a range of both tiers and types of producers was contacted; interviews were conducted with two producers, one processor, and one producer/processor. In addition, interviews were conducted with three testing laboratories. Additional opportunity for public comment will be available when the proposed rule is published. Indoor and outdoor farmers, including sun growers, were included in the interviews.

During the rule development process, the WSLCB hosted two “Listen and Learn” sessions, one in April 2019 and the second in August 2019, inviting industry discussion and feedback on the proposed rules, and discuss potential mitigation strategies. The WSLCB’s stakeholder process encouraged interested parties and industry partners to:

- Identify burdensome areas of existing and proposed rules;
- Proposed initial or draft rule changes; and
- Refine those changes.

Although the WSLCB broadly messaged these sessions (messaging went directly to *all* licensees, as well as over 10,000 GovDelivery subscribers), few processors and producers attended the sessions. This rule project was the first employing the “Listen and Learn” model, and attendees were initially unfamiliar with not only the model, but the process, although detailed agendas were provided well in advance of each meeting.

These heavily facilitated sessions followed two thought streams: the first asked attendees to review draft conceptual rules offered well in advance of the meeting and provide feedback or specific rule language, specifically indicating what they liked, didn’t like, and what they proposed in the way of a solution. No rule language revisions were offered by attendees at either session. Solutions ranged from suggesting that figures and language be more concise in general without offering example, to unsupported assertions that adding pesticides and heavy metals to the suite of required tests would put certain producers out of business.

All comments received during these sessions were curated to the extent possible, although developing themes from sessions was difficult based on the broad range of comments. The proposed rules went through several stages of edits, review, discussion, and then further refinement before arriving at the initial proposal. The end result of this process are proposed rules that are offered as a framework and guidance for testing marijuana products that supports the overarching WSLCB goal of public health and safety.

A summary of the description of issues related to the proposed rule set and how the agency collaborated with stakeholders and industry partners to mitigate potential burden associated with rule compliance is more fully described in the Significant Analysis prepared consistent with RCW 34.05.328, including a phase-in plan, and offered as part of this initial rule proposal.

Will businesses have to hire or fire employees because of the requirements in the rule?

While the impacts to individual producer processors may depend on their ability to pass on increased testing costs (in the form of higher prices to retailers), the proposed rule is not expected to affect the amount of marijuana produced. Thus, the proposed rule is unlikely to affect the overall number of employees of producer/processors or retailers. For example, if increased testing costs lead some smaller entities to cease production, other entities may produce larger volumes. While it would be an indirect effect, the proposed rule may result in some limited additional employment in the labs conducting testing. In order to conduct the testing, a lab adding this testing capability may need to hire one or two additional scientists or technicians to operate equipment and conduct tests. The extent of potential employment gains are uncertain, but given the small number of labs in the industry (currently 15 certified labs) any employment gains would likely be limited.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

Name: Katherine Hoffman
Address: 1025 Union Avenue, Olympia, WA 98501
Phone: 360-664-1622
Fax: 360-664-9689

TTY:
Email: rules@lcb.wa.gov
Other:

Date: May 27, 2020

Name: Jane Rushford

Title: Chair

Signature:

A handwritten signature in cursive script, appearing to read "Jane Rushford", is written in black ink.

WAC 314-55-101 Quality ((assurance sampling protocols)) control sampling. (1) ((To ensure quality assurance samples submitted to certified third-party laboratories (certified labs) are representative from the lot or batch from which they were sampled as required in RCW 69.50.348, licensed producers, licensed processors, certified labs, and their employees must adhere to the minimum sampling protocols as provided in this section.

(2) Sampling protocols for all marijuana product lots and batches:

(a) Samples must be deducted in a way that is most representative of the lot or batch and maintains the structure of the marijuana sample. Licensees, certified labs, and their employees may not adulterate or change in any way the representative sample from a lot or batch before submitting the sample to certified labs. This includes adulterating or changing the sample in any way as to inflate the level of potency, or to hide any microbiological contaminants from the required microbiological screening such as, but not limited to:

(i) Adulterating the sample with kief, concentrates, or other extracts;

(ii) Treating a sample with solvents to hide the microbial count of the lot or batch from which it was deducted. This subsection does not prohibit the treatment of failed lots or batches with methods approved by the WSLCB; or

(iii) Pregrinding a flower lot sample.

(b) All samples must be taken in a sanitary environment using sanitary practices and ensure facilities are constructed, kept, and maintained in a clean and sanitary condition in accordance with rules and as prescribed by the Washington state department of agriculture under chapters 16-165 and 16-167 WAC.

(c) Persons collecting samples must wash their hands prior to collecting a sample from a lot or batch, wear appropriate gloves while preparing or deducting the lot or batch for sample collection, and must use sanitary utensils and storage devices when collecting samples.

(d) Samples must be placed in a sanitary plastic or glass container, and stored in a location that prevents the propagation of pathogens and other contaminants, such as a secure, low-light, cool and dry location.

(e) The licensee must maintain the lot or batch from which the sample was deducted in a secure, low-light, cool, and dry location to prevent the marijuana from becoming contaminated or losing its efficacy.

(f) Each quality assurance sample must be clearly marked "quality assurance sample" and be labeled with the following information:

(i) The sixteen digit)) All licensed marijuana processors, producers, certified labs, and certified lab employees must comply with the sampling procedures described in this section, consistent with RCW 69.50.348. Noncompliance may result in enforcement action as described in this chapter and applicable law.

(2) **Sample collection.** All samples of marijuana, usable marijuana, or marijuana-infused products submitted to an accredited lab for testing consistent with this chapter must be collected or deducted in

a way that is most representative of the lot or batch, and maintains the structure of the marijuana sample.

(a) Facilities must be constructed and maintained consistent with applicable rules and as prescribed by the Washington state department of agriculture under chapters 16-165 and 16-167 WAC.

(b) To ensure the sample integrity, samples must be placed in a sanitary plastic or glass container, and stored in a location that prevents contamination and degradation, such as a secure, low-light, cool and dry location.

(c) The licensee must maintain the lot or batch from which the sample was deducted in a secure, low-light, cool, and dry location to prevent the marijuana from becoming contaminated or losing its efficacy.

(d) Each quality control sample must be clearly marked "quality control sample" and labeled with the following information:

(i) The identification number generated by the traceability system;

(ii) The license number and name of the certified lab receiving the sample;

(iii) The license number and trade name of the licensee sending the sample;

(iv) The date the sample was collected; and

(v) The weight of the sample.

(3) (~~Additional sampling protocols~~) Sample collection for flower lots:

(a) Licensees or certified labs must collect a minimum of four separate (~~samples~~) subsamples from each marijuana flower lot up to five pounds. Licensees or certified labs may collect more samples or subsamples than this minimum, but must not collect less. The (~~samples~~) subsamples must be of roughly equal weight not less than one gram each.

(b) The four separate (~~samples~~) subsamples must be taken from different quadrants of the flower lot. A quadrant is the division of a lot into four equal parts. Dividing a lot into quadrants prior to collecting samples must be done in a manner that ensures the (~~samples~~) subsamples are collected from four evenly distributed areas of the flower lot and may be done visually or physically.

(c) The (~~four samples~~) subsamples may be placed together in one container conforming to the packaging and labeling requirements in subsection (2) of this section for storage and transfer to a certified lab.

(4) Sample retrieval and transportation. Certified labs may retrieve samples from a marijuana licensee's licensed premises and transport the samples directly to the lab. Certified labs may also return or destroy any unused portion of the samples.

(5) Adulterated or altered samples. All licensees, certified labs, or agents of a licensee or certified labs will not adulterate or alter, or attempt to adulterate or alter any marijuana samples for the purpose of circumventing contaminant testing detection limits or potency testing requirements such as, but not limited to:

(a) Adulterating the sample with kief, concentrates, or other extracts;

(b) Treating a sample with solvents to hide the microbial count of the lot or batch from which it was deducted. This subsection does not prohibit the treatment of failed lots or batches with methods approved by the board; or

(c) Pregrinding a flower lot sample.

(6) Sample rejection or failure. Certified labs ((may)) must reject or fail a sample if the lab ((has reason to)) believes the sample was not collected in the manner required by this section, adulterated ((in any way)), contaminated with known or unknown solvents, or manipulated in a manner that violates the sampling protocols, limit tests, or action levels.

~~((6) The WSLCB or its designee will take immediate disciplinary action against any licensee or certified lab that fails to comply with the provisions of this section or falsifies records related to this section including, without limitation, revoking the license the licensed producer or processor, or certification of the certified lab.))~~

AMENDATORY SECTION (Amending WSR 17-12-032, filed 5/31/17, effective 8/31/17)

WAC 314-55-102 Quality assurance ((testing)) and quality control.

(Effective until February 28, 2021)

(1) Lab certification and accreditation for quality control testing. To become certified, a third-party ((testing)) lab must ((be certified by the WSLCB or the WSLCB's vendor as meeting the WSLCB's accreditation and other requirements prior to)) meet the board's certification and accreditation requirements as described in WAC 314-55-0995 and this chapter before conducting quality ((assurance)) control tests required under this section.

~~((1) Quality assurance fields of testing. Certified labs must be certified to the following fields of testing by the WSLCB or its designee and must adhere to the guidelines for each quality assurance field of testing listed below, with the exception of mycotoxin, heavy metal, or pesticide residue screening. Certification to perform mycotoxin, heavy metals and pesticides may be obtained but is not required to obtain certification as a testing lab. A lab must become certified in all fields of testing prior to conducting any testing or screening in that field of testing, regardless of whether the test is required under this section.))~~ (a) Certified labs must be certified to the following fields of testing:

- (i) Moisture analysis;
- (ii) Potency analysis;
- (iii) Foreign matter inspection;
- (iv) Microbiological screening;
- (v) Mycotoxin screening; and
- (vi) Residual solvents.

(b) Certified labs may be certified for heavy metal, pesticide, or terpene testing. Certified labs must comply with the guidelines for each quality control field of testing described in this chapter if they offer that testing service.

(c) Certified labs may reference samples for heavy metal, pesticide, or terpene testing by subcontracting for those fields of testing.

(2) General quality control testing requirements for certified labs.

(a) Certified labs must record an acknowledgment of the receipt of samples from producers or processors in the board seed to sale

traceability system. Certified labs must also verify when any unused portion of the sample is destroyed or returned to the licensee after the completion of required testing.

(b) When applicable, certified labs must report quality control test results directly to the board traceability system when quality control tests for the field of testing are required.

(c) Product must not be converted, transferred or sold until the required tests are reported to the board and the licensee.

(d) Certified labs must fail a sample if the results for any limit test are above allowable levels regardless of whether the limit test is required in the testing tables in this chapter.

(e) Certified labs must test samples on an "as is" or "as received" basis.

(3) **Quality control fields of testing.** The following fields of testing are only required for samples of marijuana flower that have not been previously tested, or that have failed quality control testing.

(a) **Potency analysis.**

(i) Certified labs must test and report the following cannabinoids to the ((WSLCB)) board when testing for potency:

- (A) THCA;
- (B) THC;
- (C) Total THC;
- (D) CBDA;
- (E) CBD; and
- (F) Total CBD.

(ii) Calculating total THC and total CBD.

(A) Total THC must be calculated as follows, where M is the mass or mass fraction of delta-9 THC or delta-9 THCA: $M \text{ total delta-9 THC} = M \text{ delta-9 THC} + (0.877 \times M \text{ delta-9 THCA})$.

(B) Total CBD must be calculated as follows, where M is the mass or mass fraction of CBD and CBDA: $M \text{ total CBD} = M \text{ CBD} + (0.877 \times M \text{ CBDA})$.

(iii) Any psychoactive cannabinoids intentionally added to the formula of a product must be tested for potency including, but not limited to, delta-8-THC.

(iv) Regardless of analytical equipment or methodology, certified labs must accurately measure and report the acidic (THCA and CBDA) and neutral (THC and CBD) forms of the cannabinoids.

(b) **Potency analysis for flower lots.**

(i) Certified labs must test and report the results for the required flower lot samples as described in WAC 314-55-101(3) for the following required cannabinoids:

- (A) THCA;
- (B) THC;
- (C) Total THC;
- (D) CBDA;
- (E) CBD; and
- (F) Total CBD.

(ii) Calculating total THC and total CBD.

(A) Total THC must be calculated as follows, where M is the mass or mass fraction of delta-9 THC or delta-9 THCA: $M \text{ total delta-9 THC} = M \text{ delta-9 THC} + (0.877 \times M \text{ delta-9 THCA})$.

(B) Total CBD must be calculated as follows, where M is the mass or mass fraction of CBD and CBDA: $M \text{ total CBD} = M \text{ CBD} + (0.877 \times M \text{ CBDA})$.

(c) Certified labs (~~may combine in equal parts multiple samples from the same flower lot for the purposes of the following tests after the individual samples described in WAC 314-55-101(3) have been tested for potency analysis.~~) must test each flower lot identified in WAC 314-55-101(3) for the following:

(i) **Moisture analysis.** The sample and related lot or batch fails quality ((assurance)) control testing for moisture analysis if the results exceed the following limits:

- (A) Water activity rate of more than 0.65 a_w; (~~and~~) or
- (B) Moisture content more than fifteen percent.

(ii) **Foreign matter screening.** The sample and related lot or batch fail quality ((assurance)) control testing for foreign matter screening if the results exceed the following limits:

- (A) Five percent of stems 3 mm or more in diameter; (~~and~~) or
- (B) Two percent of seeds or other foreign matter; or
- (C) One insect fragment, one hair, or one mammalian excreta sample.

(iii) **Microbiological screening.** The sample and related lot or batch fail quality ((assurance)) control testing for microbiological screening if the results exceed the following limits:

	Enterobacteria (bile-tolerant gram-negative bacteria)	<i>E. coli</i> (pathogenic strains) and <i>Salmonella spp.</i>
Unprocessed Plant Material	10 ⁴	Not detected in 1g
Extracted or processed Botanical Product	10 ³	Not detected in 1g

(iv) **Mycotoxin screening.** (~~The sample and related lot or batch fail quality assurance testing for mycotoxin screening if the results exceed the following limits:~~

- ~~(A) Total of Aflatoxin B1, B2, G1, G2: 20 µg/kg of substance; and~~
- ~~(B) Ochratoxin A: 20 µg/kg of substance.)~~ For purposes of mycotoxin screening, a sample shall be deemed to have passed if it meets the following standards:

Test	Specification
<u>The total of aflatoxin B1, aflatoxin B2, aflatoxin G1 and aflatoxin G2</u>	<u>≤20 µg/kg of substance</u>
<u>Ochratoxin A</u>	<u>≤20 µg/kg of substance</u>

(d) **Residual solvent screening.** Except as otherwise provided in this subsection, a sample and related lot or batch fail quality ((assurance)) control testing for residual solvents if the results exceed the limits provided in the table below. Residual solvent results of more than 5,000 ppm for class three solvents, 50 ppm for class two solvents, and 2 ppm for class one solvents as defined in *United States Pharmacopoeia, USP 30 Chemical Tests / <467> - Residual Solvents (USP <467>)* not listed in the table below fail quality ((assurance)) control testing. When residual solvent screening is required, certified labs must test for the solvents listed in the table below at a minimum.

Solvent*	ppm
Acetone	5,000
Benzene	2

Solvent*	ppm
Butanes	5,000
Cyclohexane	3,880
Chloroform	2
Dichloromethane	600
Ethyl acetate	5,000
Heptanes	5,000
Hexanes	290
Isopropanol (2-propanol)	5,000
Methanol	3,000
Pentanes	5,000
Propane	5,000
Toluene	890
Xylene**	2,170

*And isomers thereof.

**Usually 60% *m*-xylene, 14% *p*-xylene, 9% *o*-xylene with 17% ethyl benzene.

(e) **Heavy metal screening.** A sample and related lot or batch fail quality ((assurance)) control testing for heavy metals if the results exceed the limits provided in the table below.

(Metal	µ/daily dose (5 grams)
Inorganic arsenic	10.0
Cadmium	4.1
Lead	6.0
Mercury	2.0

~~(2) Quality assurance testing required.)~~

Metal	µg/g
Arsenic	2.0
Cadmium	0.82
Lead	1.2
Mercury	0.40

(f) **Pesticide screening.** For purposes of the pesticide screening, a sample shall be deemed to have passed if it meets the standards described in WAC 314-55-108 and applicable department of agriculture rules.

(g) **Terpenes.** Testing for terpene presence and concentration is required if:

(i) The producer or processor states terpene content on any product packaging, labeling, or both; or

(ii) The producer or processor adds terpenes to their product.

(4) **Required quality control tests.** The following quality ((assurance)) control tests are ((the minimum)) required ((tests)) for each of the ((following)) marijuana products((, respectively)) described below. Licensees and certified labs may ((elect to do multiple)) opt to perform additional quality ((assurance)) control tests on the same lot ((or testing for mycotoxin, pesticides, or heavy metals pursuant to chapter 246-70 WAC)).

(a) ~~(General quality assurance testing requirements for certified labs.)~~

~~(i) Certified labs must record an acknowledgment of the receipt of samples from producers or processors in the WSLCB seed to sale traceability system. Certified labs must also verify if any unused portion of the sample was destroyed or returned to the licensee after the completion of required testing.~~

~~(ii) Certified labs must report quality assurance test results directly to the WSLCB traceability system when quality assurance tests for the field of testing are required within twenty-four hours of completion of the test(s).~~

~~(iii) Certified labs must fail a sample if the results for any limit test are above allowable levels regardless of whether the limit test is required in the testing tables in this section.~~

~~(b-)) **Marijuana flower lots ((and other material lots))**. Marijuana flower lots ((or other material lots)) require the following quality ((assurance)) control tests:~~

Product	Test(s) Required
Lots of marijuana flowers or other material that will not be extracted	1. Moisture ((content)) <u>analysis</u> 2. Potency analysis 3. Foreign matter inspection 4. Microbiological screening 5. Mycotoxin screening

~~((e))~~ (b) **Intermediate products**. Intermediate products must meet the following requirements related to quality ~~((assurance))~~ control testing:

~~(i) All intermediate products must be homogenized prior to quality ((assurance)) control testing;~~

~~(ii) For the purposes of this section, a batch is defined as a single run through the extraction or infusion process;~~

~~(iii) A batch of marijuana mix may not exceed five pounds and must be chopped or ground so no particles are greater than 3 mm; and~~

~~(iv) All batches of intermediate products require the following quality ((assurance)) control tests:~~

Product	Test(s) Required Intermediate Products
Marijuana mix	1. Moisture ((content*)) <u>analysis</u> 2. Potency analysis 3. Foreign matter inspection ((*)) 4. Microbiological screening 5. Mycotoxin screening
Concentrate or extract made with hydrocarbons (solvent based made using n-butane, isobutane, propane, heptane, or other solvents or gases approved by the board of at least 99% purity)	1. Potency analysis 2. Mycotoxin screening ((*)) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u> 3. Residual solvent test
Concentrate or extract made with a CO ₂ extractor like hash oil	1. Potency analysis 2. Mycotoxin screening ((*)) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u> 3. Residual solvent test

Product	Test(s) Required Intermediate Products
Concentrate or extract made with ethanol	1. Potency analysis 2. Mycotoxin screening ^(*) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u> 3. Residual solvent test
Concentrate or extract made with approved food grade solvent	1. Potency analysis 2. Microbiological screening ^(*) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u> 3. Mycotoxin screening ^(*) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u> 4. Residual solvent test
Concentrate or extract (nonsolvent) such as kief, hash, rosin, or bubble hash	1. Potency analysis 2. Microbiological screening 3. Mycotoxin screening
Infused cooking oil or fat in solid form	1. Potency analysis 2. Microbiological screening ^(*) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u> 3. Mycotoxin screening ^(*) - <u>Field of testing is only required if using lots of marijuana flower that have not passed QA testing</u>

(*) Field of testing is only required if using lots of marijuana flower and other plant material that has not passed QA testing.

(d)) (c) **End products.** All marijuana, marijuana-infused products, marijuana concentrates, marijuana mix packaged, and marijuana mix infused sold from a processor to a retailer require the following quality ((assurance)) control tests:

Product	Test(s) Required End Products
Infused solid edible	Potency analysis
Infused liquid (like a soda or tonic)	Potency analysis
Infused topical	Potency analysis
Marijuana mix packaged (loose or rolled)	Potency analysis
Marijuana mix infused (loose or rolled)	Potency analysis
Concentrate or marijuana-infused product for inhalation	Potency analysis
<u>Other</u>	<u>Potency analysis</u>

~~((e))~~ (d) End products consisting of only one intermediate product that has not been changed in any way are not subject to potency analysis.

~~((3) No lot of)~~ (5) Usable flower, batch of marijuana concentrate, or batch of marijuana-infused product may not be sold or transported until the completion and successful passage of required quality ((assurance)) control testing ((as required in this section)), except:

(a) Business entities with multiple locations licensed under the same UBI number may transfer marijuana products between the licensed locations ~~((under the same UBI number prior to quality assurance testing)); and~~

(b) Licensees may wholesale and transfer batches or lots of flower and other material that will be extracted and marijuana mix and nonsolvent extracts for the purposes of further extraction prior to completing required quality ~~((assurance)) control testing. Licensees may wholesale and transfer failed lots or batches to be extracted pursuant to subsection (5) of this section, unless failed for tests that require immediate destruction.~~

~~((4) Samples, lots, or batches that fail quality assurance testing.)~~ (6) Failed test samples.

(a) Upon approval by the ~~((WSLCB)) board,~~ failed lots or batches may be used to create extracts. After processing, the extract must pass all quality ~~((assurance)) control tests required in this section before it may be sold, unless failed for tests that require immediate destruction.~~

(b) **Retesting.** ~~((At the request of the)) A producer or processor ~~((the WSLCB)) must request retesting. The board may authorize ((a)) the requested retest to validate a failed test result on a case-by-case basis. ((All costs of the retest will be borne by)) The producer or the processor requesting the retest ~~((Potency retesting will generally not be authorized)) must pay for the cost of all retesting.~~~~~~

(c) **Remediation.** Remediation is a process or technique applied to marijuana harvests, lots, or batches. Remediation may occur after the first failure of the lot, batch, or both depending on the failure, or if a retest process results in a second failure. Pesticide failures may not be remediated.

(i) Producers and processors may remediate failed ~~((harvests,))~~ lots, ~~((or))~~ batches, or both so long as the remediation method does not impart any toxic or ~~((deleterious)) harmful substance to the usable marijuana, marijuana concentrates, or marijuana-infused product. Remediation solvents or methods used on the marijuana product must be disclosed to:~~

(A) A licensed processor;

(B) The producer or producer/processor who transfers the marijuana products ~~((to));~~

(C) A licensed retailer carrying marijuana products derived from the remediated ~~((harvest,))~~ lot ~~((or))~~ or batch; or

(D) A consumer upon request.

(ii) The entire ~~((harvest,))~~ lot ~~((or))~~ or batch from which the failed sample(s) were deducted ~~((from))~~ must be remediated ~~((using the same remediation technique)).~~

(iii) No remediated ~~((harvest,))~~ lots ~~((or)),~~ batches, or both may be sold or transported until ~~((the completion and successful passage of quality assurance testing as required in this section)) quality control testing consistent with the requirements of this section is completed.~~

(iv) If a failed lot or batch is not remediated or reprocessed in any way, it cannot be retested. Any subsequent COAs produced without remediation or reprocessing of the failed batch will not supersede the initial regulatory compliance testing COA.

~~((5))~~ (7) Referencing. Certified labs may reference samples for ~~((mycotoxin))~~ terpenes, heavy metals, and pesticides testing to other certified labs by subcontracting for those fields of testing. Labs must record all referencing to other labs on a chain-of-custody manifest that includes, but is not limited to, the following information: Lab name, certification number, transfer date, address, contact information, delivery personnel, sample ID numbers, field of testing, receiving personnel.

~~((6))~~ (8) Certified labs are not limited in the amount of usable marijuana and marijuana products they may have on their premises at any given time, but a certified lab must have records proving all marijuana and marijuana-infused products in the certified lab's possession are held only for the testing purposes described in this ~~((section))~~ chapter.

~~((7) Upon the request of the WSLCB)~~ (9) The board or its designee ~~((7))~~ may request that a licensee or a certified lab ~~((must))~~ provide an employee of the ~~((WSLCB))~~ board or their designee samples of marijuana or marijuana products or samples of the growing medium, soil amendments, fertilizers, crop production aids, pesticides, or water for random compliance checks. Samples may be screened randomly for pesticides, and chemical residues, unsafe levels of heavy metals, and used for other quality ~~((assurance))~~ control tests deemed necessary by the ~~((WSLCB))~~ board.

NEW SECTION

WAC 314-55-1021 Quality assurance and quality control.

(Effective March 1, 2021, until August 31, 2021)

(1) Lab certification and accreditation for quality control testing. To become certified, a third-party lab must meet the board's certification and accreditation requirements as described in WAC 314-55-0995 and this chapter before conducting quality control tests required under this section.

(a) Certified labs must be certified to the following fields of testing:

- (i) Moisture analysis;
- (ii) Potency analysis;
- (iii) Foreign matter inspection;
- (iv) Microbiological screening;
- (v) Mycotoxin screening; and
- (vi) Residual solvents.

(b) Certified labs may be certified for heavy metal, pesticide, or terpene testing. Certified labs must comply with the guidelines for each quality control field of testing described in this section if they offer that testing service.

(c) Certified labs may reference samples for heavy metal, pesticide, or terpene testing by subcontracting for those fields of testing.

(2) **General quality control testing requirements for certified labs.**

(a) Certified labs must record an acknowledgment of the receipt of samples from producers or processors in the board seed to sale traceability system. Certified labs must also verify when any unused portion of the sample is destroyed or returned to the licensee after the completion of required testing.

(b) When applicable, certified labs must report quality control test results directly to the board traceability system when quality control tests for the field of testing are required.

(c) Product must not be converted, transferred, or sold until the required tests are reported to the board and the licensee.

(d) Certified labs must fail a sample if the results for any limit test are above allowable levels regardless of whether the limit test is required in the testing tables in this chapter.

(e) Certified labs must test samples on an "as is" or "as received" basis.

(3) **Quality control fields of testing.** The following fields of testing are only required for samples of marijuana flower that have not been previously tested, or that have failed quality control testing.

(a) **Potency analysis.**

(i) Certified labs must test and report the following cannabinoids to the board when testing for potency:

- (A) THCA;
- (B) THC;
- (C) Total THC;
- (D) CBDA;
- (E) CBD; and
- (F) Total CBD.

(ii) Calculating total THC and total CBD.

(A) Total THC must be calculated as follows, where M is the mass or mass fraction of delta-9 THC or delta-9 THCA: $M \text{ total delta-9 THC} = M \text{ delta-9 THC} + (0.877 \times M \text{ delta-9 THCA})$.

(B) Total CBD must be calculated as follows, where M is the mass or mass fraction of CBD and CBDA: $M \text{ total CBD} = M \text{ CBD} + (0.877 \times M \text{ CBDA})$.

(iii) Any psychoactive cannabinoids intentionally added to the formula of a product must be tested for potency including, but not limited to, delta-8-THC.

(iv) Regardless of analytical equipment or methodology, certified labs must accurately measure and report the acidic (THCA and CBDA) and neutral (THC and CBD) forms of the cannabinoids.

(b) **Potency analysis for flower lots.**

(i) Certified labs must test and report the results for the required flower lot samples as described in WAC 314-55-101(3) for the following required cannabinoids:

- (A) THCA;
- (B) THC;
- (C) Total THC;
- (D) CBDA;
- (E) CBD; and
- (F) Total CBD.

(ii) Calculating total THC and total CBD.

(A) Total THC must be calculated as follows, where M is the mass or mass fraction of delta-9 THC or delta-9 THCA: $M \text{ total delta-9 THC} = M \text{ delta-9 THC} + (0.877 \times M \text{ delta-9 THCA})$.

(B) Total CBD must be calculated as follows, where M is the mass or mass fraction of CBD and CBDA: $M \text{ total CBD} = M \text{ CBD} + (0.877 \times M \text{ CBDA})$.

(c) Certified labs must test each flower lot identified in WAC 314-55-101(3) for the following:

(i) **Moisture analysis.** The sample and related lot or batch fails quality control testing for moisture analysis if the results exceed the following limits:

(A) Water activity rate of more than 0.65 a_w ; or

(B) Moisture content more than fifteen percent.

(ii) **Foreign matter screening.** The sample and related lot or batch fail quality control testing for foreign matter screening if the results exceed the following limits:

(A) Five percent of stems 3 mm or more in diameter; or

(B) Two percent of seeds or other foreign matter; or

(C) One insect fragment, one hair, or one mammalian excreta per sample.

(iii) **Microbiological screening.** The sample and related lot or batch fail quality control testing for microbiological screening if the results exceed the following limits:

	Enterobacteria (bile-tolerant gram-negative bacteria)	<i>E. coli</i> (pathogenic strains) and <i>Salmonella spp.</i>
Unprocessed Plant Material	10 ⁴	Not detected in 1g
Extracted or Processed Botanical Product	10 ³	Not detected in 1g

(iv) **Mycotoxin screening.** For purposes of mycotoxin screening, a sample shall be deemed to have passed if it meets the following standards:

Test	Specification
The total of aflatoxin B1, aflatoxin B2, aflatoxin G1 and aflatoxin G2	≤20 µg/kg of substance
Ochratoxin A	≤20 µg/kg of substance

(d) **Residual solvent screening.** Except as otherwise provided in this subsection, a sample and related lot or batch fail quality control testing for residual solvents if the results exceed the limits provided in the table below. Residual solvent results of more than 5,000 ppm for class three solvents, 50 ppm for class two solvents, and 2 ppm for class one solvents as defined in *United States Pharmacopoeia, USP 30 Chemical Tests / <467> - Residual Solvents (USP <467>)* not listed in the table below fail quality control testing. When residual solvent screening is required, certified labs must test for the solvents listed in the table below at a minimum.

Solvent*	ppm
Acetone	5,000
Benzene	2
Butanes	5,000
Cyclohexane	3,880
Chloroform	2
Dichloromethane	600
Ethyl acetate	5,000

Solvent*	ppm
Heptanes	5,000
Hexanes	290
Isopropanol (2-propanol)	5,000
Methanol	3,000
Pentanes	5,000
Propane	5,000
Toluene	890
Xylene**	2,170

*And isomers thereof.

**Usually 60% *m*-xylene, 14% *p*-xylene, 9% *o*-xylene with 17% ethyl benzene.

(e) **Heavy metal screening.** A sample and related lot or batch fail quality control testing for heavy metals if the results exceed the limits provided in the table below.

Metal	µg/g
Arsenic	2.0
Cadmium	0.82
Lead	1.2
Mercury	0.40

(f) **Pesticide screening.** For purposes of the pesticide screening, a sample shall be deemed to have passed if it meets the standards described in WAC 314-55-108 and applicable department of agriculture rules.

(g) **Terpenes.** Testing for terpene presence and concentration is required if:

(i) The producer or processor states terpene content on any product packaging, labeling, or both; or

(ii) The producer or processor adds terpenes to their product.

(4) **Required quality control tests.** The following quality control tests are required for each of the marijuana products described below. Licensees and certified labs may opt to perform additional quality control tests on the same lot.

(a) **Marijuana flower lots.** Marijuana flower lots require the following quality control tests:

Product	Test(s) Required
Lots of marijuana flowers or other material that will not be extracted	1. Moisture analysis 2. Potency analysis 3. Foreign matter inspection 4. Microbiological screening 5. Mycotoxin screening 6. Pesticide screening

(b) **Intermediate products.** Intermediate products must meet the following requirements related to quality control testing:

(i) All intermediate products must be homogenized prior to quality control testing;

(ii) For the purposes of this section, a batch is defined as a single run through the extraction or infusion process;

(iii) A batch of marijuana mix may not exceed five pounds and must be chopped or ground so no particles are greater than 3 mm; and

(iv) All batches of intermediate products require the following quality control tests:

Product	Test(s) Required Intermediate Products
Marijuana mix	<ol style="list-style-type: none"> 1. Moisture analysis 2. Potency analysis 3. Foreign matter inspection 4. Microbiological screening 5. Mycotoxin screening 6. Pesticide screening
Concentrate or extract made with hydrocarbons (solvent based made using n-butane, isobutane, propane, heptane, or other solvents or gases approved by the board of at least 99% purity)	<ol style="list-style-type: none"> 1. Potency analysis 2. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Residual solvent test 4. Pesticide screening
Concentrate or extract made with a CO ₂ extractor like hash oil	<ol style="list-style-type: none"> 1. Potency analysis 2. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Residual solvent test 4. Pesticide screening
Concentrate or extract made with ethanol	<ol style="list-style-type: none"> 1. Potency analysis 2. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Residual solvent test 4. Pesticide screening
Concentrate or extract made with approved food grade solvent	<ol style="list-style-type: none"> 1. Potency analysis 2. Microbiological screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 4. Residual solvent test 5. Pesticide screening
Concentrate or extract (nonsolvent) such as kief, hash, rosin, or bubble hash	<ol style="list-style-type: none"> 1. Potency analysis 2. Microbiological screening 3. Mycotoxin screening 4. Pesticide screening
Infused cooking oil or fat in solid form	<ol style="list-style-type: none"> 1. Potency analysis 2. Microbiological screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 4. Pesticide screening

(c) **End products.** All marijuana, marijuana-infused products, marijuana concentrates, marijuana mix packaged, and marijuana mix infused sold from a processor to a retailer require the following quality control tests:

Product	Test(s) Required End Products
Infused solid edible	Potency analysis
Infused liquid (like a soda or tonic)	Potency analysis
Infused topical	Potency analysis
Marijuana mix packaged (loose or rolled)	Potency analysis
Marijuana mix infused (loose or rolled)	Potency analysis
Concentrate or marijuana-infused product for inhalation	Potency analysis
Other	Potency analysis

(d) End products consisting of only one intermediate product that has not been changed in any way are not subject to potency analysis.

(5) Usable flower, batch of marijuana concentrate, or batch of marijuana-infused product may not be sold or transported until the completion and successful passage of required quality control testing, except:

(a) Business entities with multiple locations licensed under the same UBI number may transfer marijuana products between the licensed locations; and

(b) Licensees may wholesale and transfer batches or lots of flower and other material that will be extracted and marijuana mix and nonsolvent extracts for the purposes of further extraction prior to completing required quality control testing. Licensees may wholesale and transfer failed lots or batches to be extracted pursuant to this subsection, unless failed for tests that require immediate destruction.

(6) **Failed test samples.**

(a) Upon approval by the board, failed lots or batches may be used to create extracts. After processing, the extract must pass all quality control tests required in this section before it may be sold, unless failed for tests that require immediate destruction.

(b) **Retesting.** A producer or processor must request retesting. The board may authorize retest to validate a failed test result on a case-by-case basis. The producer or the processor requesting the retest must pay for the cost of all retesting.

(c) **Remediation.** Remediation is a process or technique applied to marijuana harvests, lots, or batches. Remediation may occur after the first failure of the lot, batch, or both depending on the failure, or if a retest process results in a second failure. Pesticide failures may not be remediated.

(i) Producers and processors may remediate failed lots, batches, or both so long as the remediation method does not impart any toxic or harmful substance to the usable marijuana, marijuana concentrates, or marijuana-infused product. Remediation solvents or methods used on the marijuana product must be disclosed to:

(A) A licensed processor;

(B) The producer or producer/processor who transfers the marijuana products;

(C) A licensed retailer carrying marijuana products derived from the remediated lot or batch; or

(D) A consumer upon request.

(ii) The entire lot or batch from which the failed sample(s) were deducted must be remediated.

(iii) No remediated lots, batches, or both may be sold or transported until quality control testing consistent with the requirements of this section is completed.

(iv) If a failed lot or batch is not remediated or reprocessed in any way, it cannot be retested. Any subsequent COAs produced without remediation or reprocessing of the failed batch will not supersede the initial regulatory compliance testing COA.

(7) **Referencing.** Certified labs may reference samples for terpenes, heavy metals, and pesticides testing to other certified labs by subcontracting for those fields of testing. Labs must record all referencing to other labs on a chain-of-custody manifest that includes, but is not limited to, the following information: Lab name, certification number, transfer date, address, contact information, delivery personnel, sample ID numbers, field of testing, receiving personnel.

(8) Certified labs are not limited in the amount of usable marijuana and marijuana products they may have on their premises at any given time, but a certified lab must have records proving all marijuana and marijuana-infused products in the certified lab's possession are held only for the testing purposes described in this chapter.

(9) The board or its designee may request that a licensee or a certified lab provide an employee of the board or their designee samples of marijuana or marijuana products or samples of the growing medium, soil amendments, fertilizers, crop production aids, pesticides, or water for random compliance checks. Samples may be screened randomly for pesticides, chemical residues, unsafe levels of heavy metals, and used for other quality control tests deemed necessary by the board.

NEW SECTION

WAC 314-55-1022 Quality assurance and quality control.

(Effective September 1, 2021)

(1) **Lab certification and accreditation for quality control testing.** To become certified, a third-party lab must meet the board's certification and accreditation requirements as described in WAC 314-55-0995 and this chapter before conducting quality control tests required under this section.

(a) Certified labs must be certified to the following fields of testing:

- (i) Moisture analysis;
- (ii) Potency analysis;
- (iii) Foreign matter inspection;
- (iv) Microbiological screening;
- (v) Mycotoxin screening; and
- (vi) Residual solvents.

(b) Certified labs may be certified for heavy metal, pesticide, or terpene testing. Certified labs must comply with the guidelines for

each quality control field of testing described in this section if they offer that testing service.

(c) Certified labs may reference samples for heavy metal, pesticide, or terpene testing by subcontracting for those fields of testing.

(2) **General quality control testing requirements for certified labs.**

(a) Certified labs must record an acknowledgment of the receipt of samples from producers or processors in the board seed to sale traceability system. Certified labs must also verify when any unused portion of the sample is destroyed or returned to the licensee after the completion of required testing.

(b) When applicable, certified labs must report quality control test results directly to the board traceability system when quality control tests for the field of testing are required.

(c) Product must not be converted, transferred, or sold until the required tests are reported to the board and the licensee.

(d) Certified labs must fail a sample if the results for any limit test are above allowable levels regardless of whether the limit test is required in the testing tables in this chapter.

(e) Certified labs must test samples on an "as is" or "as received" basis.

(3) **Quality control fields of testing.** The following fields of testing are only required for samples of marijuana flower that have not been previously tested, or that have failed quality control testing.

(a) **Potency analysis.**

(i) Certified labs must test and report the following cannabinoids to the board when testing for potency:

- (A) THCA;
- (B) THC;
- (C) Total THC;
- (D) CBDA;
- (E) CBD; and
- (F) Total CBD.

(ii) Calculating total THC and total CBD.

(A) Total THC must be calculated as follows, where M is the mass or mass fraction of delta-9 THC or delta-9 THCA: $M \text{ total delta-9 THC} = M \text{ delta-9 THC} + (0.877 \times M \text{ delta-9 THCA})$.

(B) Total CBD must be calculated as follows, where M is the mass or mass fraction of CBD and CBDA: $M \text{ total CBD} = M \text{ CBD} + (0.877 \times M \text{ CBDA})$.

(iii) Any psychoactive cannabinoids intentionally added to the formula of a product must be tested for potency including, but not limited to, delta-8-THC.

(iv) Regardless of analytical equipment or methodology, certified labs must accurately measure and report the acidic (THCA and CBDA) and neutral (THC and CBD) forms of the cannabinoids.

(b) **Potency analysis for flower lots.**

(i) Certified labs must test and report the results for the required flower lot samples as described in WAC 314-55-101(3) for the following required cannabinoids:

- (A) THCA;
- (B) THC;
- (C) Total THC;
- (D) CBDA;
- (E) CBD; and

(F) Total CBD.

(ii) Calculating total THC and total CBD.

(A) Total THC must be calculated as follows, where M is the mass or mass fraction of delta-9 THC or delta-9 THCA: $M \text{ total delta-9 THC} = M \text{ delta-9 THC} + (0.877 \times M \text{ delta-9 THCA})$.

(B) Total CBD must be calculated as follows, where M is the mass or mass fraction of CBD and CBDA: $M \text{ total CBD} = M \text{ CBD} + (0.877 \times M \text{ CBDA})$.

(c) Certified labs must test each flower lot identified in WAC 314-55-101(3) for the following:

(i) **Moisture analysis.** The sample and related lot or batch fails quality control testing for moisture analysis if the results exceed the following limits:

(A) Water activity rate of more than 0.65 a_w ; or

(B) Moisture content more than fifteen percent.

(ii) **Foreign matter screening.** The sample and related lot or batch fail quality control testing for foreign matter screening if the results exceed the following limits:

(A) Five percent of stems 3 mm or more in diameter; or

(B) Two percent of seeds or other foreign matter; or

(C) One insect fragment, one hair, or one mammalian excreta per sample.

(iii) **Microbiological screening.** The sample and related lot or batch fail quality control testing for microbiological screening if the results exceed the following limits:

	Enterobacteria (bile-tolerant gram-negative bacteria)	<i>E. coli</i> (pathogenic strains) and <i>Salmonella spp.</i>
Unprocessed Plant Material	10 ⁴	Not detected in 1g
Extracted or Processed Botanical Product	10 ³	Not detected in 1g

(iv) **Mycotoxin screening.** For purposes of mycotoxin screening, a sample shall be deemed to have passed if it meets the following standards:

Test	Specification
The total of aflatoxin B1, aflatoxin B2, aflatoxin G1 and aflatoxin G2	≤20 µg/kg of substance
Ochratoxin A	≤20 µg/kg of substance

(d) **Residual solvent screening.** Except as otherwise provided in this subsection, a sample and related lot or batch fail quality control testing for residual solvents if the results exceed the limits provided in the table below. Residual solvent results of more than 5,000 ppm for class three solvents, 50 ppm for class two solvents, and 2 ppm for class one solvents as defined in *United States Pharmacopoeia, USP 30 Chemical Tests / <467> - Residual Solvents (USP <467>)* not listed in the table below fail quality control testing. When residual solvent screening is required, certified labs must test for the solvents listed in the table below at a minimum.

Solvent*	ppm
Acetone	5,000
Benzene	2
Butanes	5,000

Solvent*	ppm
Cyclohexane	3,880
Chloroform	2
Dichloromethane	600
Ethyl acetate	5,000
Heptanes	5,000
Hexanes	290
Isopropanol (2-propanol)	5,000
Methanol	3,000
Pentanes	5,000
Propane	5,000
Toluene	890
Xylene**	2,170

*And isomers thereof.

**Usually 60% *m*-xylene, 14% *p*-xylene, 9% *o*-xylene with 17% ethyl benzene.

(e) **Heavy metal screening.** A sample and related lot or batch fail quality control testing for heavy metals if the results exceed the limits provided in the table below.

Metal	µg/g
Arsenic	2.0
Cadmium	0.82
Lead	1.2
Mercury	0.40

(f) **Pesticide screening.** For purposes of the pesticide screening, a sample shall be deemed to have passed if it meets the standards described in WAC 314-55-108 and applicable department of agriculture rules.

(g) **Terpenes.** Testing for terpene presence and concentration is required if:

(i) The producer or processor states terpene content on any product packaging, labeling, or both; or

(ii) The producer or processor adds terpenes to their product.

(4) **Required quality control tests.** The following quality control tests are required for each of the marijuana products described below. Licensees and certified labs may opt to perform additional quality control tests on the same lot.

(a) **Marijuana flower lots.** Marijuana flower lots require the following quality control tests:

Product	Test(s) Required
Lots of marijuana flowers or other material that will not be extracted	1. Moisture analysis 2. Potency analysis 3. Foreign matter inspection 4. Microbiological screening 5. Mycotoxin screening 6. Pesticide screening 7. Heavy metals screening

(b) **Intermediate products.** Intermediate products must meet the following requirements related to quality control testing:

- (i) All intermediate products must be homogenized prior to quality control testing;
- (ii) For the purposes of this section, a batch is defined as a single run through the extraction or infusion process;
- (iii) A batch of marijuana mix may not exceed five pounds and must be chopped or ground so no particles are greater than 3 mm; and
- (iv) All batches of intermediate products require the following quality control tests:

Product	Test(s) Required Intermediate Products
Marijuana mix	1. Moisture analysis 2. Potency analysis 3. Foreign matter inspection 4. Microbiological screening 5. Mycotoxin screening 6. Pesticide screening 7. Heavy metals screening
Concentrate or extract made with hydrocarbons (solvent based made using n-butane, isobutane, propane, heptane, or other solvents or gases approved by the board of at least 99% purity)	1. Potency analysis 2. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Residual solvent test 4. Pesticide screening 5. Heavy metals screening
Concentrate or extract made with a CO ₂ extractor like hash oil	1. Potency analysis 2. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Residual solvent test 4. Pesticide screening 5. Heavy metals screening
Concentrate or extract made with ethanol	1. Potency analysis 2. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Residual solvent test 4. Pesticide screening 5. Heavy metals screening
Concentrate or extract made with approved food grade solvent	1. Potency analysis 2. Microbiological screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 4. Residual solvent test 5. Pesticide screening 6. Heavy metals screening
Concentrate or extract (nonsolvent) such as kief, hash, rosin, or bubble hash	1. Potency analysis 2. Microbiological screening 3. Mycotoxin screening 4. Pesticide screening 5. Heavy metals screening

Product	Test(s) Required Intermediate Products
Infused cooking oil or fat in solid form	1. Potency analysis 2. Microbiological screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 3. Mycotoxin screening - Field of testing is only required if using lots of marijuana flower that have not passed QA testing 4. Pesticide screening 5. Heavy metals screening

(c) **End products.** All marijuana, marijuana-infused products, marijuana concentrates, marijuana mix packaged, and marijuana mix infused sold from a processor to a retailer require the following quality control tests:

Product	Test(s) Required End Products
Infused solid edible	Potency analysis
Infused liquid (like a soda or tonic)	Potency analysis
Infused topical	Potency analysis
Marijuana mix packaged (loose or rolled)	Potency analysis
Marijuana mix infused (loose or rolled)	Potency analysis
Concentrate or marijuana-infused product for inhalation	Potency analysis
Other	Potency analysis

(d) End products consisting of only one intermediate product that has not been changed in any way are not subject to potency analysis.

(5) Usable flower, batch of marijuana concentrate, or batch of marijuana-infused product may not be sold or transported until the completion and successful passage of required quality control testing, except:

(a) Business entities with multiple locations licensed under the same UBI number may transfer marijuana products between the licensed locations; and

(b) Licensees may wholesale and transfer batches or lots of flower and other material that will be extracted and marijuana mix and nonsolvent extracts for the purposes of further extraction prior to completing required quality control testing. Licensees may wholesale and transfer failed lots or batches to be extracted pursuant to this subsection, unless failed for tests that require immediate destruction.

(6) **Failed test samples.**

(a) Upon approval by the board, failed lots or batches may be used to create extracts. After processing, the extract must pass all quality control tests required in this section before it may be sold, unless failed for tests that require immediate destruction.

(b) **Retesting.** A producer or processor must request retesting. The board may authorize the requested retest to validate a failed test result on a case-by-case basis. The producer or the processor requesting the retest must pay for the cost of all retesting.

(c) **Remediation.** Remediation is a process or technique applied to marijuana harvests, lots, or batches. Remediation may occur after the first failure of the lot, batch, or both depending on the failure, or if a retest process results in a second failure. Pesticide failure may not be remediated.

(i) Producers and processors may remediate failed lots, batches, or both so long as the remediation method does not impart any toxic or harmful substance to the usable marijuana, marijuana concentrates, or marijuana-infused product. Remediation solvents or methods used on the marijuana product must be disclosed to:

(A) A licensed processor;

(B) The producer or producer/processor who transfers the marijuana products;

(C) A licensed retailer carrying marijuana products derived from the remediated lot or batch; or

(D) A consumer upon request.

(ii) The entire lot or batch from which the failed sample(s) were deducted must be remediated.

(iii) No remediated lots, batches, or both may be sold or transported until quality control testing consistent with the requirements of this section is completed.

(iv) If a failed lot or batch is not remediated or reprocessed in any way, it cannot be retested. Any subsequent COAs produced without remediation or reprocessing of the failed batch will not supersede the initial regulatory compliance testing COA.

(7) **Referencing.** Certified labs may reference samples for terpenes, heavy metals, and pesticides testing to other certified labs by subcontracting for those fields of testing. Labs must record all referencing to other labs on a chain-of-custody manifest that includes, but is not limited to, the following information: Lab name, certification number, transfer date, address, contact information, delivery personnel, sample ID numbers, field of testing, and receiving personnel.

(8) Certified labs are not limited in the amount of usable marijuana and marijuana products they may have on their premises at any given time, but a certified lab must have records proving all marijuana and marijuana-infused products in the certified lab's possession are held only for the testing purposes described in this chapter.

(9) The board or its designee may request that a licensee or a certified lab provide an employee of the board or their designee samples of marijuana or marijuana products or samples of the growing medium, soil amendments, fertilizers, crop production aids, pesticides, or water for random compliance checks. Samples may be screened randomly for pesticides, chemical residues, unsafe levels of heavy metals, and used for other quality control tests deemed necessary by the board.

AMENDATORY SECTION (Amending WSR 17-12-032, filed 5/31/17, effective 8/31/17)

WAC 314-55-1025 Proficiency testing. (1) For the purposes of this section, the following definitions apply:

(a) "Field of testing" means the categories of subject matter the laboratory tests, such as pesticide, microbial, potency, residual sol-

vent, heavy metal, mycotoxin, foreign matter, and moisture content detection.

(b) "Proficiency testing (PT)" means the analysis of samples by a laboratory obtained from providers where the composition of the sample is unknown to the laboratory performing the analysis and the results of the analysis are used in part to evaluate the laboratory's ability to produce precise and accurate results.

(c) "Proficiency testing (PT) program" means an operation offered by a provider to detect a laboratory's ability to produce valid results for a given field of testing.

(d) "Provider" means a third-party company, organization, or entity not associated with certified laboratories or a laboratory seeking certification that operates an approved PT program and provides samples for use in PT testing.

(e) "Vendor" means an organization(s) approved by the ((~~WSLCB~~)) board to certify laboratories for marijuana testing, approve PT programs, and perform on-site assessments of laboratories.

(2) The ((~~WSLCB~~)) board or its vendor determines the sufficiency of PTs and maintains a list of approved PT programs. Laboratories may request authorization to conduct PT through other PT programs but must obtain approval for the PT program from ((~~WSLCB or WSLCB's~~)) the board or board's vendor prior to conducting PT. The ((~~WSLCB~~)) board may add the newly approved PT program to the list of approved PT programs as appropriate.

(3) As a condition of certification, laboratories must participate in PT and achieve a passing score for each field of testing for which the lab will be or is certified.

(4) A laboratory must successfully complete a minimum of one round of PT for each field of testing the lab seeks to be certified for and provide proof of the successful PT results prior to initial certification.

(5)(a) A certified laboratory must participate in a minimum of two rounds of PT per year for each field of testing to maintain its certification.

(b) To maintain certification, the laboratory must achieve a passing score, on an ongoing basis, in a minimum of two out of three successive rounds of PT. At least one of the scores must be from a round of PT that occurs within six months prior to the laboratory's certification renewal date.

(6) If the laboratory fails to achieve a passing score on at least eighty percent of the analytes in any proficiency test, the test is considered a failure. If the PT provider provides a pass/fail on a per analyte basis but not on the overall round of PT the lab participates in, the pass/fail evaluation for each analyte will be used to evaluate whether the lab passed eighty percent of the analytes. If the PT provider does not provide individual acceptance criteria for each analyte, the following criteria will be applied to determine whether the lab achieves a passing score for the round of PT:

(a) +/- 30% recovery from the reference value for residual solvent testing; or

(b) +/- 3 z or 3 standard deviations from the reference value for all other fields of testing.

(7) If a laboratory fails a round of PT or reports a false negative on a micro PT, the laboratory must investigate the root cause of the laboratory's performance and establish a corrective action report for each unsatisfactory analytical result. The corrective action report must be kept and maintained by the laboratory for a period of

three years, available for review during an on-site assessment or inspection, and provided to the ((~~WSLCB or WSLCB's~~)) board or board's vendor upon request.

(8) Laboratories are responsible for obtaining PT samples from vendors approved by ((~~WSLCB or WSLCB's~~)) the board or board's vendor. Laboratories are responsible for all costs associated with obtaining PT samples and rounds of PT.

(9) The laboratory must manage, analyze and report all PT samples in the same manner as customer samples including, but not limited to, adhering to the same sample tracking, sample preparation, analysis methods, standard operating procedures, calibrations, quality control, and acceptance criteria used in testing customer samples.

(10) The laboratory must authorize the PT provider to release all results used for certification and/or remediation of failed studies to ((~~WSLCB or WSLCB's~~)) the board or board's vendor.

(11) The ((~~WSLCB~~)) board may require the laboratory to submit raw data and all photographs of plated materials along with the report of analysis of PT samples. The laboratory must keep and maintain all raw data and all photographs of plated materials from PT for a period of three years.

(12) The ((~~WSLCB~~)) board may waive proficiency tests for certain fields of testing if PT samples or PT programs are not readily available or for other valid reasons as determined by ((~~WSLCB~~)) the board.

(13)(a) The ((~~WSLCB~~)) board will suspend a laboratory's certification if the laboratory fails to maintain a passing score on an ongoing basis in two out of three successive PT studies. The ((~~WSLCB~~)) board may reinstate a laboratory's suspended certification if the laboratory successfully analyzes PT samples from a ((~~WSLCB or WSLCB's~~)) board or board's vendor approved PT provider, so long as the supplemental PT studies are performed at least fifteen days apart from the analysis date of one PT study to the analysis date of another PT study.

(b) The ((~~WSLCB~~)) board will suspend a laboratory's certification if the laboratory fails two consecutive rounds of PT. ((~~WSLCB~~)) The board may reinstate a laboratory's suspended certification once the laboratory conducts an investigation, provides the ((~~WSLCB~~)) board a deficiency report identifying the root cause of the failed PT, and successfully analyzes PT samples from a ((~~WSLCB or WSLCB's~~)) board or board's vendor approved PT provider. The supplemental PT studies must be performed at least fifteen days apart from the analysis date of one PT study to the analysis date of another PT study.

(14) If a laboratory fails to remediate and have its certification reinstated under subsection (13)(a) or (b) of this section within six months of the suspension, the laboratory must reapply for certification as if the laboratory was never certified previously.

(15) A laboratory that has its certification suspended or revoked under this section may request an administrative hearing to contest the suspension as provided in chapter 34.05 RCW.