

(3) **Quality control analysis and screening.** The following analysis and screening are only required for samples that have not been previously tested, or that have failed quality control testing.

(a) **Cannabinoid concentration analysis.** Licensees are required to use certified labs to conduct cannabinoid concentration analyses and report the test results to the board in the state traceability system. Licensees must test for the following cannabinoids:

- (i) Cannabidiol (CBD) and cannabidiolic acid (CBDA);
- (ii) Delta-9 THC and THCA; and
- (iii) Any tetrahydrocannabinols, as defined in RCW 69.50.204 that will be marketed or advertised as part of the product or displayed elsewhere. Each THC compound must be individually identified.

(i) **Measuring and reporting cannabinoid concentrations.** The concentration of all cannabinoids tested must be accurately measured, regardless of the analytical equipment or methodology, and reported to the board in the state traceability system, as described in this subsection. Licensees may only use labs with

an established limit of quantitation (LOQ) of 0.01% (0.10 mg/g) or lower, and limit of detection (LOD) of 0.03% (0.30 mg/g) or lower, for all cannabinoids tested.

(A) The CBD concentration and THC concentration must be reported as a percentage by weight or volume. The CBD concentration and THC concentration do not account for the potential conversion of the acidic form of the compound into the neutral form of the compound and reflects the only CBD and THC compounds present at the time of testing. The concentration of each cannabinoid must be individually identified.

(B) Total CBD is the value determined after the process of decarboxylation, or the application of a conversion factor if the testing methodology does not include decarboxylation, that expresses the potential total cannabidiol derived from the sum of the CBD and CBDA concentration. Total CBD must be reported as milligrams per gram (mg/g), if by dry weight; or milligrams per milliliter (mg/ML), if by volume.

(I) To calculate the total CBD, the following formula must be used, where M is the mass or fraction of CBD or CBDA: $M \text{ total CBD} = (0.877 \times M \text{ CBDA}) + M \text{ CBD}$.

(C) Total THC is the value determined after the process of decarboxylation, or the application of a conversion factor if the testing methodology does not include decarboxylation, that expresses the potential total tetrahydrocannabinol derived from the sum of the THC and THCA concentration. Total THC must be reported as milligrams per gram (mg/g), if by dry weight; or milligrams per milliliter (mg/ML), if by volume.

(I) To calculate the total THC, the following formula must be used, where M is the mass or fraction of the THC compound: $M_{\text{total THC of compound}} = (\text{conversion factor} \times M_{\text{THC acid}}) + M_{\text{THC}}$. For example, the following formula is to calculate total delta-9 THC, where M is the mass or fraction of the delta-9 THC or THCA: $M_{\text{total delta-9 THC}} = (0.877 + M_{\text{delta-9 THCA}}) + M_{\text{delta-9 THC}}$. Each THC compound must be individually identified.

(II) If two or more THC compounds are detected in the cannabinoid concentration analysis, the total THC refers to the sum of the total THC of the individual compounds. The total THC concentration must be calculated using the following formula, where M is the mass or fraction of the THC compound(s), and the subscripts represent individual compounds: $M_{\text{total THC}}$

concentration = [(M total THC₁) + (M total THC₂) + (M total THC₃)]. For example, to calculate the total THC concentration of a product that contains two THC compounds, delta-8 THC and delta-9 THC, the following formula must be used, where M is the mass or fraction of the THC compound: M total THC = [(M total delta-9 THC) + (M total delta-8 THC)]. Each THC compound must be individually identified.

(ii) **Failed tests.** A sample fails the cannabinoid concentration analysis if the presence of any tetrahydrocannabinols that do not naturally occur in the plant Cannabis or synthetic or synthetically-derived cannabinoid is detected. Failed tests must be reported to the board immediately.