Technical Bulletin
New Testing Requirements

This Bulletin is intended to update all licensees on the implementation of the new testing requirements found in the Mississippi Medical Cannabis Program (MMCP) Regulations, Subpart 5, Product Testing and safety, and available at https://www.mmcp.ms.gov/compliance/regulations. These regulations were published on January 13, 2024, with Subpart 5, Product Testing and Safety regulations. However, enforcement of the new testing requirements was extended until July 29, 2024, to allow testing facilities adequate time to implement the new methodologies. Please be aware that the information contained in this Bulletin and associated links do not represent legal advice or replace a licensee's responsibility to review and comply with statute and rules.

I. Homogeneity Requirements for Processors

A final medical cannabis product must be homogenous, with cannabinoid content evenly distributed throughout the cannabis product. Homogeneity testing or the process of homogeneous sampling, is when all items in a sample are chosen at random to be representative of product batch so they have similar or identical traits. As defined in **Rule 1.2.57**, homogeneity means the that " amount of cannabinoids within a cannabis product are consistent and reasonably and equally dispersed throughout the cannabis product, including each portion of the cannabis product.". Effective July 29, 2024, the Department will require processors to perform homogeneity testing on all cannabis-infused products in accordance with the below administrative rule.

Rule 5.4.11 Standards for Homogeneity Testing.

A. Infused cannabis products must be homogenous, with the THC and CBD content evenly distributed throughout.
B. Infused cannabis products shall only be considered homogenous if the concentration of total THC and/or CBD in milligrams per serving for three (3) units from the batch is +/- 15% of the stated THC/CBD per serving.
C. Each type of infused product shall be tested every six (6) months and any time the manufacturing process or ingredient(s) change.
D. An infused cannabis product that fails homogeneity testing shall not be released for retail sale. All subsequent production batches of the failed item type shall undergo homogeneity testing until three (3) consecutive batches pass.
E. The testing entity shall enter all test results into the seed-to-sale system within three (3) business days of test completion.
F. The processor shall maintain copies of the test results for each product type for at least one (1) year after the specific item is discontinued.

The Department requires the below practices to verify that cannabis-infused products are homogeneous.

- Using homogenous ingredients when producing products, it is critical that the oil or distillate used has been thoroughly mixed and tested.
- Ensuring the scales and measuring instruments are calibrated and the calibrations are verified daily.
- Sourcing non-cannabis ingredients from reputable companies who are GMP-certified.

Testing for homogeneity is not required on every batch of cannabis-infused product. Homogeneity testing is required on the initial batch and every six months thereafter, as verification, if the manufacturing process does not change. The processor is responsible for ensuring homogeneity testing is performed as required and that a homogeneity report is available for each product formula.

To perform homogeneity testing, a testing facility will collect three (3) randomized units from a production batch and perform potency testing to determine the uniformity of total THC and CBD throughout the product. Each unit shall be treated as a separate individual sample and a total of 3 units shall be sampled at random from the same batch. The concentration of total THC and CBD must be recorded and the variability of concentration of Total THC and CBD among the three (3) units in a single batch may not exceed +/- 15%.

This can be determined by first calculating the Standard Deviation (SD) among samples and subsequently calculating the Relative Standard Deviation (RSD) for the concentration of Total THC and Total CBD. The SD is calculated using the following formula:

$$SD = \sqrt{\frac{(sample1 - mean)^2 + (sample2 - mean)^2, \dots, (sample10 - mean)^2}{total\ number\ of\ samples - 1}}$$

The RSD is calculated using the following formula

$$RSD = \frac{SD}{mean} x\ 100$$

The Department has determined that the laboratories should complete potency testing based on the information provided by the processors at the time of the sampling event.

- If a product is sampled as an individual serving/dosage, the facility will report total THC by serving/dose.
- If the product is sampled in the final package, total THC content for the package will be reported.

It is not incumbent on the laboratory to determine if the product will meet the package labeling requirements. The laboratory testing results provided on the package will report the calculated THC as the product was submitted for testing and is not required to replicate the processor designated package

label for THC content. The processor designated package label will be considered the target THC. The allowable variation for THC and CBD concentrations between the actual results and the intended serving is to be + or – 15%.

II. Required Laboratory Testing of Medical Cannabis Products

Effective July 29, 2024, all licensees are required to perform the testing summarized in the below table:

Table 1.

Type of Testing	List of Changes	Required	Product Type Test if Required
Potency	N/A	Yes	All product Type
Pesticides, Fungicides and Growth Regulators	N/A	Yes	All product types
Filth/Foreign Material	N/A	Yes	All product types
Heavy Metals: Arsenic, Cadmium, Total Chromium, Nickel, and Lead, Mercury, and Copper	Addition of Total Chromium, Nickel, and Copper to test panel	Yes	Total Chromium- All products Nickel- Flower, Inhalable concentrates, Vape cartridges Copper- Vape cartridges only
Mycotoxins	N/A	Yes	All product types
Total coliform	New	Yes	All product types
Shiga toxin-producing *E.coli*	N/A	Yes	All product types
***Salmonella* sp.**	N/A	Yes	All product types
***Aspergillus* sp.**	N/A	Yes	All product types
Total Mold and Yeast	New Requirement	Yes	All product types
Water Activity	Yes- New requirement for infused edibles	Yes	Flower products and solid, infused edibles
Moisture content	N/A	Yes	Flower products
Residual Solvents	N/A	Yes	All products except non-solvent based concentrates* and flower
Homogeneity		Yes	Infused edibles, Infused non-edibles solids and infused beverages
Terpenes		No	R &D only

* Extraction using ice water, rosin press or dry ice

Metrc has been updated to reflect the above testing changes. A guide, Metrc Lab User Guide 24.1, was published on July 6, 2024 to provide instructions on how to order the above mentioned tests that become effective on July 29, 2024. Questions can be sent to the Mississippi Medical Cannabis Program via email at msmedicalcannabis@msdh.ms.gov.