



Dr. Randall W. Williams, Director
Missouri Department of Health and Senior Services
P.O Box 570
Jefferson City, Missouri 65102-0570

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Dr. Williams:

As a leading voice for the medical cannabis industry in Missouri, MoCannTrade wishes to both voice our strong support and pledge our assistance to the “Clear the Air” public health campaign targeting underage users and announced by Gov. Parson this month.

We concur that the recent reports of pulmonary illnesses and deaths linked to the use of nicotine and cannabis vapor products demand the continued and sustained scrutiny of public health investigators, federal and state regulators and the legal cannabis industry.

According to the CDC, many of these cases involve marijuana vaping products that were purchased on the unregulated, untested black market. With Missouri preparing to award hundreds of medical marijuana facility licenses in the coming months and begin regulated retail sales of lab-tested medical marijuana early next year, it is incumbent that we continue to work together to safeguard public health — and diminish the black market.

To that end, MoCannTrade wishes to share the following recommendations for Missouri operators and licensed manufacturers of infused products, as well as some suggested enhancements to the state’s medical cannabis testing protocol. These recommended best practices were developed in conjunction with our membership, industry experts and national organizations such as the Marijuana Policy Project and the National Cannabis Industry Association.

- Ban medical marijuana vapor products that contain lipids or lipid-based thinning agents such as medium-chain triglyceride (MCT) oil, propylene glycol, vegetable glycerin, polyethylene glycol or Vitamin E acetate. This ban should only apply to vapor products, as these substances are considered safe when properly ingested or applied to the skin, but not when inhaled.
- Clearly label all active and inactive ingredients in marijuana-infused products, including the liquid for vapor cartridges, and any lipid-based ingredients (i.e. thickening additives) used in the manufacturing process.



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- Ensure all marijuana and marijuana-derived products, as well as vapor cartridges and product packaging, are confirmed lead-free and heavy metal-free from the manufacturer or point of origin. The state's current testing standards allow for trace amounts of lead, mercury, cadmium, inorganic arsenic and total chromium.
- Ensure that any product tested via gas chromatography–mass spectrometry looks for unexpected analyte peaks to better identify disallowed adulterants such as fentanyl, HU-210, CP 47,497 and homologues JWH-018, JWH-073, JWH-398, JWH-250 and oleamide.
- Revise the current mercury testing standard for infused products to a safer level of 1.5 parts per million.
- Enhance and expand microbial screening to test for additional forms of bacteria, yeast and mold (see attached list).

Last fall 66 percent of Missourians went to the polls and voted to give patients access to safe, regulated medical marijuana. The constitutional amendment gives DHSS the responsibility to remain vigilant in adopting and changing rules and regulations as health information becomes available. As new developments emerge, and additional clarity is provided as to the source and scope of this outbreak, we are prepared to update our response and recommendations accordingly.

We look forward to continued collaboration with you, Director Fraker and the rest of the department and program to promote and ensure the health, welfare and safety of Missouri patients and their families.

With kind regards,

Andrew Mullins
Executive Director

cc: Lyndall Fraker



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TECHNICAL ADDENDUM

<u>Substance</u>	<u>Acceptable Limits Per Gram</u>	<u>Product to be Tested</u>
–Shiga-toxin producing Escherichia coli (STEC)-Bacteria	< 1 Colony Forming Unit (CFU)	Flower; Medical Marijuana Infused-Product (other than Audited Product); Water-Based, Heat/Pressure-Based, and Food-
Salmonella species – Bacteria	< 1 Colony Forming Unit (CFU)	
Total Yeast and Mold	< 10 ⁴ Colony Forming Unit (CFU)	Based Medical Marijuana Concentrate
	≤10 ¹ cfu/ml or ≤10 ¹ cfu/g	Audited Product: administration by metered dose nasal spray, pressurized metered dose inhaler, or vaginal administration
	≤10 ² cfu/ml or ≤10 ² cfu/g	Audited Product: rectal administration
Total aerobic microbial count	≤10 ² cfu/ml or ≤10 ² cfu/g	Audited Product: administration by metered dose nasal spray, pressurized
		metered dose inhaler, or vaginal administration
	≤10 ³ cfu/ml or ≤10 ³ cfu/g	Audited Product: rectal administration
<i>Staphylococcus Aureus</i>	Absent in 1 ml or 1 g	Audited Product: administration by metered dose nasal spray, pressurized metered dose inhaler, or vaginal administration
<i>Pseudomonas aeruginosa</i>	Absent in 1 ml or 1 g	Audited Product: administration by metered dose nasal spray, pressurized metered dose inhaler, or vaginal administration
<i>Bile tolerant gram negative bacteria</i>	Absent in 1 ml or 1 g	Audited Product: administration by metered dose nasal spray or pressurized metered dose inhaler
<i>Candida albicans</i>	Absent in 1 ml or 1 g	Audited Product: vaginal administration



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d. Mycotoxins

Substance	Acceptable Limits Per Gram	Product to be Tested
Aflatoxins (B1, B2, G1, and G2)	< 20 parts per billion (PPB) (total of B1 + B2 + G1 + G2)	Solvent-Based Medical Marijuana Concentrate manufactured from Medical Marijuana flower or trim that failed microbial testing
Ochratoxin A	< 20 parts per billion (PPB)	

e. Residual Solvents

Substance	Acceptable Limits Per Gram	Product to be Tested
Acetone	< 1,000 Parts Per Million (PPM)	Solvent-Based Medical Marijuana Concentrate

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f. Metals

<u>Substance</u>	<u>Acceptable Limits Per Gram Based on Intended Use</u>	<u>Product to be Tested</u>
Metals (Arsenic, Cadmium, Lead and Mercury)	<p>Inhaled or Audited Product: administration by metered dose nasal spray or pressurized metered dose inhaler</p> <p>Lead – Max Limit: < .5 ppm</p> <p>Arsenic – Max Limit: < 2 ppm</p> <p>Cadmium – Max Limit: < 2 ppm</p> <p>Mercury – Max Limit: < 1 ppm</p> <hr/> <p>Topical and/or Transdermal:</p> <p>Lead – Max Limit: < 10 ppm</p> <p>Arsenic – Max Limit: < 3 ppm</p> <p>Cadmium – Max Limit: < 3 ppm</p> <p>Mercury – Max Limit: < 1 ppm</p> <hr/> <p>Oral Consumption or Audited Product: rectal or vaginal administration</p> <p>Lead – Max Limit: < 1 ppm</p> <p>Arsenic – Max Limit: < 1.5 ppm</p> <p>Cadmium – Max Limit: < 0.5 ppm</p> <p>Mercury – Max Limit: < 1.5 ppm</p>	Flower; Medical Marijuana-Infused Product; Water-Based, Food-Based, Heat/Pressure-Based, and Solvent-Based Medical Marijuana Concentrate