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## Department Approved Pesticide Chemical List

The intent of this technical bulletin is to release the approved pesticide chemical list in accordance with the Medical Marihuana Facilities Licensing Act (MMFLA) and the Emergency Rules published December 4, 2017.

Regarding Rule 31(9), for the purposes of the pesticide chemical residue test, a sample provided to a safety compliance facility is deemed to have passed as to that approved chemical from this bulletin if the sample satisfies the most stringent acceptable standard for an approved pesticide chemical residue as set forth in:

- Subpart C of 40 C.F.R. Part 180, 40 C.F.R. § 180, et seq.  
**OR**
- FIFRA section 25(b)

If the approved pesticide chemical is not listed in either the subpart or the section, the approved pesticide chemical is exempt from tolerance requirements.

Residue tolerance requirements are set by the United States Environmental Protection Agency (US EPA) for each pesticide on each food crop and are the amount of pesticide residue allowed to remain in or on each treated crop with “reasonable certainty of no harm.” Some pesticides are exempt from the tolerance requirement when they are found to be minimal risk.

The Natural Resources and Environmental Protection Act, 1994 PA 451, Part 83 et seq. and Michigan Department of Agriculture & Rural Development (MDARD) regulations apply to all pesticide use; marihuana is no exception. Specifically:

- Any pesticide or pest control companies, obtained by marihuana facilities to apply pesticides, shall obtain a commercial applicator license through MDARD.
- If a product has a label, applicators shall fully adhere to the label. This includes when using pesticide products in marihuana cultivation, applicators must not use a rate that is higher than the rates listed on the label.

Pesticide chemicals not included in this bulletin are forbidden to be used for the cultivation of marihuana in accordance with the MMFLA and Emergency Rules. Use of unauthorized pesticide chemicals and failed pesticide chemical tests will be referred to the LARA-BMMR Enforcement Section for investigation and inspection. This may result in sanctions, including, but not limited to, license denial, limitation, fines, revocation, suspension, nonrenewal, administrative holds, and orders to cease operations. The department may issue future pesticide lists that supersede the information contained in this bulletin. The following approved pesticide chemicals are organized by the intended target:

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## Insecticides and Miticides

- Ammonium salts
- Acequinoocyl
- Azadirachtin
- Bacillus subtilis GB03
- Bacillus thuringiensis
- Bacillus thuringiensis sub. kurstaki
- Bacillus thuringiensis sub. israelensis
- Beauveria bassiana
- Beauveria bassiana strain ANT-03
- Beauveria bassiana strain GHA
- Bifenazate
- Burkholderia spp. strain A396
- Capric acid
- Caprylic acid
- Capsaicin
- Capsicum oleoresin
- Chromobacterium sub strain PRAA4-1 cells
- Chromobacterium substsugae
- Cinnamon and cinnamon oil
- Citric acid
- Farnesol
- Garlic and garlic oil
- Geraniol
- Horticultural oils (petroleum oil)
- Insecticidal soaps (potassium salts of fatty acids)
- Isaria fumosorosea
- Neem oil
- Nerolidol
- Paecilomyces fumosoroseus
- Paraffinic oil (mineral oil)
- Potassium bicarbonate
- Potassium sorbate
- Rosemary oil
- Sesame and sesame oil
- Sodium bicarbonate
- Soybean oil
- Sulfur
- Spinetoram
- Spinosad
- Sucrose octanoate
- Sucrose octanoate esters
- Sulfur
- Thyme and thyme oil
- White pepper

## Fungicides and Antimicrobials

- Ammonium salts
- Bacillus amyloliquefaciens strain D747
- Beauveria bassiana
- Beauveria bassiana strain ANT-03
- Bacillus pumilus strain GHA 180
- Caprylic acid
- Cloves and clove oil
- Copper hydroxide
- Copper octanoate
- Copper oxychloride
- Corn oil
- Cottonseed oil
- Eugenol
- Fenhexamid
- Fludioxonil
- Gliocladium virens
- Mono and di-potassium salts of phosphorous acid
- Neem oil
- Peppermint and peppermint oil
- Potassium bicarbonate
- Potassium silicate
- Reynoutria sachalinensis extract
- Rosemary and rosemary oil
- Sodium bicarbonate
- Streptomyces lydicus wyec 108
- Trichoderma saperellum strain ICC 012
- Trichoderma gamsii strain ICC 080
- Trichoderma harzianum
- Trichoderma harzianum rifai strain KRL-AG2

## Vertebrate Repellants

- Castor oil
- Geraniol

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*This technical bulletin does not constitute legal advice and is subject to change. It is intended to provide a technical clarification only to the Department of Licensing and Regulatory Affairs' Emergency Rules which were promulgated on December 4, 2017. Licensees are encouraged to seek legal counsel to ensure their operations comply with the Medical Marijuana Facilities Licensing Act and associated Emergency Rules.*

A complete copy of the Emergency Rules can be found [here](#)

More information on the BMMR can be found at the bureau's [website](#)

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