Processors (Extracts) Technical Subcommittee

June 15, 2015 Meeting Summary and Recommendations

Committee Attendees: Amanda Jamrose, Cameron Yee, Charles Weller, Ethan Felcher, Karen Sprague, Jason Wasserman, Michael Lausmann, Norris Monson

Absent: none

Other Attendees: Chris Lyons (RAC Chairperson)

OLCC Staff Representatives: Kelly Routt, Amanda Borup, Steve Marks

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The processors' (extracts) technical subcommittee met on June 15, 2015 to discuss types of extracts products, safety precautions, testing, and facility safety and security. The following is a summary of that meeting and the subcommittee's rule recommendations on those topics. For purposes of this and future summaries and recommendations, these phrases are defined as follows:

- ***"Believes"*** or "***agrees"***: no member of the committee voiced a conflicting opinion or approach.
- ***"Generally agrees"***: some members of the committee voiced a differing sentiment than this prevailing opinion or approach.

1. Marijuana License requirements

The subcommittee believes that a set of Standard Operating Procedures (SOPs) should be submitted to the Commission with the license application. Examples of items that must be present in an applicant's SOP are equipment operation and maintenance, operator certification, employee training, facility safety protocols, emergency shutdown procedures, and inventory control.

2. Testing

The extract subcommittee members all generally obtain a "full panel" test of their finished products, which includes tests for pesticides, mold, mildew, residual solvents, and potency. The subcommittee agrees that these tests should be required for all processors. Heavy metal testing is available, but is cost prohibitive. More research needs to be conducted on heavy metal testing before it should be required by rule. The subcommittee did not believe that pre-screening of products should be required by rule, although some conduct pre-screening as part of their SOP. Subcommittee members agreed that the products should be tested prior to being sold to consumers.

a. Products that test positive for impurities

As a matter of best practices, processors who make products that test positive for pesticides, mold, mildew, and residual solvents tend to keep these products for a certain period of time because they are valuable for experimentation and because the product could be further processed to remove impurities. However, the subcommittee agrees that OLCC rules should not mandate that these products be kept for a

minimum amount of time or be immediately destroyed. The positive results should be tracked and documented (to be discussed at a later meeting). The recommended requirement to test products before they enter commerce will ensure that the products with unacceptable levels of pesticides, mold, mildew or residual solvents will not leave the facility.

b. Batch sizes

The subcommittee generally agrees that a testing sample should be *at least* one gram. An optimal testing sample is five grams, and two grams is necessary in order to test pesticides. Because the amount of product used to make an extract can vary depending on the amount of product available, the subcommittee generally agrees that rules should not mandate batch sizes (i.e. x grams/100 pounds).

3. Safety Precautions

The extracts subcommittee members utilize the following solvents in their processing: butane, propane, ethanol, water, carbon dioxide, and hexane. Other methodologies utilize liquid oxygen, liquid nitrogen, oil, and glycerin. The subcommittee agrees that Class I solvents (as identified by the FDA) should be prohibited because they are carcinogenic, toxic, and are environmental hazards. Otherwise, the subcommittee believes that solvents and their corresponding processes should not be specifically prohibited but the methodology should be controlled.

a. Residual solvents

The subcommittee agrees that there should be a limit to the amount of residual solvents present in extracts; however, the subcommittee did not reach consensus on what the amount should be. Different regulatory bodies have different limits (FDA: 5,000 parts per million [ppm], EU: 1,000 ppm, OSHA: 800 ppm, State of Washington: 500 ppm, and the Emerald Trade Alliance: 50 ppm). The amount of residual solvents could vary based on the solvent used.

b. Mitigating risk

Given the potential combustibility of solvents used in extract processing, the subcommittee members follow the recommendations of their local fire marshal and National Fire Protection Agency (NFPA) Code No. 58 to mitigate fire and explosion risks. The subcommittee agrees that processing areas must have appropriate venting. Processors that use carbon dioxide should have pressure protocols in place. To further mitigate risk, the subcommittee generally agrees that processor licensees should have spark-proof and evacuation fans and lower explosive limit (LEL) detectors. There are more stringent safety precautions recommended by various regulatory agencies that should be mandated, but the subcommittee believes that there should be a tiered implementation schedule for these; for example, three to six months to obtain appropriate safety levels. The subcommittee agrees that blast-proof rooms should not be required.

As a matter of best practices, the subcommittee members follow OSHA and EPA guidelines to maintain safe facilities. The subcommittee believes that eye washing stations be required by rule. Chemical showers should not be required. The subcommittee agreed that ethanol and other alcohols should be quarantined in a cage or other flammable storage. Carbon dioxide processors should have pressure protocols.

c. Inspections

The subcommittee agrees that inspections should be mandatory.

d. Other regulatory agency guidelines

Because the processing of cannabis extracts is not currently regulated, the subcommittee provided a list of regulatory agency guidelines that they follow as best practices: NSF International (provides 3rd party certifications), International Conference on Harmonization (ICH), Good Manufacturing Practices (GMP) of the International Society of Pharmaceutical Engineering (ISPE), the European Union (EU), Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). Subcommittee members will provide the Commission with relevant portions of these guidelines to review.

4. Security

The subcommittee generally agrees that facility security rules should be the same as they are for alcohol or tobacco products. The most important aspect of facility security is inventory control, and a licensee's SOP should account for how it will protect inventory. A secure cage is more cost efficient than a safe or a vault, and the level of security at a processor's facility should be left up to the processor. The subcommittee generally agrees that cameras are necessary at all exterior doors, where product is secured, and in the processing area. The subcommittee generally believes that 30 days of video storage is sufficient. All video should be date and time stamped.