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A Modification of the GENE-UP Aspergillus PRO to include a Non-Viable DNA Removal Step with IS Viability Kit: AOAC Performance Tested Method 022103

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Abstract: Several recent studies have indicated that fungal contaminants, specifically *Aspergillus*, are routinely isolated from cannabis plants. It is estimated that between 10-20% of cannabis flower fail testing requirements, with most due to fungal contamination. This has resulted in an increase in remediation steps designed to eliminate pathogenic bacteria but which may not eliminate the presence of their DNA in the flower. Highly sensitive methods, such as PCR, can detect this DNA from non-viable organisms. The IS Viability Kit resolves this problem by eliminating DNA from non-viable organisms prior to PCR analysis.

The GENE-UP® *Aspergillus* PRO assay was validated in a modification study to incorporate the IS Viability Kit and extend the method's scope to hemp flower. Testing was performed according to Appendix J: AOAC INTERNATIONAL Methods Committee Guidelines for Validation of Microbiological Methods for Food and Environmental Surfaces and AOAC SMPR 2019.001 for Detection of *Aspergillus* in Cannabis and Cannabis Products.

Results of the study indicated the IS Viability Kit was successful in removing non-viable DNA from the matrix and a scope expansion was granted to the method.