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Presentation of Publication Use of X-ray irradiation for inactivation of *Aspergillus* in Cannabis flower

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Abstract: California cannabis regulations require testing for four pathogenic species of *Aspergillus*—*A. niger*, *A. flavus*, *A. fumigatus* and *A. terreus* in cannabis flower and cannabis inhalable products. These four pathogenic species of *Aspergillus* are important human pathogens and their presence in cannabis flower and cannabis products may pose a threat to human health. In this study, we examined the potential of X-ray irradiation for inactivation of cannabis flower contaminated with any of the four pathogenic species of *Aspergillus*. We determined that X-ray irradiation at a dose of 2.5 kGy is capable of rendering *Aspergillus* cells non-viable at low (102 spores/g dried flower), medium (103 spores/g dried flower) and high (104 spores/g dried flower) levels of inoculation. We also showed that X-ray treatment of cannabis flower did not significantly alter the cannabinoid or the terpene profiles of the flower samples. Therefore, X-ray irradiation may be a feasible method for *Aspergillus* decontamination of cannabis flower.