MITIGATION - SCIENCE AND TECHNOLOGY ADVANCES FOR CHEMICAL AND BIOLOGICAL HAZARD MITIGATION

Decontamination Efficacy Validations For Clandestine Site Remediation Motivating Development Of A Standard Practice

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MRIGlobal regularly evaluates the efficacy of COTS and emerging decontamination products for activity against CWA, opioids, narcotics, pathogens, and other illicit materials. When it comes to CWA, there are several exhaustive standard guidance documents dictating rigor and scope of the tests performed; all aimed at proving successful hazard mitigation based on specific human activities. Gross, residual liquid, vapor/aerosol, contact hazard, and other types of standard test procedures can be performed to ensure anyone subsequently occupying an area or touching a given surface will not be exposed. While guidance also exists for these same products to validate biological efficacy, a synonymous standard guidance document does not yet exist for determining the efficacy of varied products against commonly encountered clandestine threats such as opioids, NPS, and other illicit narcotics. This creates an imbalance of appropriate and responsible claims supported by operationally relevant testing. Many experimental designs are used, all of which have a place in the efficacy validation process, but we must be clear as to which approaches enable which conclusions.

Colorimetric, qualitative, quantitative, and optimization approaches each have a role in the overall product development and validation cycle, and each will be discussed, focusing on the quantitative and operationally suitable approaches typically performed by MRIGlobal. The collection and subsequent cleanup of illicit production, distribution, and use sites remains a risky operation for law enforcement and the contractors typically hired to perform such site remediations. The use of products proven through rigorous and standardized testing will enable a safe, expedited, and more thorough cleaning of these type of sites and provide a more rapid return to normal for the civilians whom reside in adjacent areas.