D17 A Practical Guide to Processing Synthetic Cannabinoid and Cathinone Operations

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After attending this presentation, attendees will gain the necessary knowledge to safely access and process an illicit operation that manufactures synthetic cannabinoid and cathinone commercial products.

This presentation will impact the forensic science community by providing an overview of the inside operations of a processing site for the manufacturing of commercial and illicit "spice" and "bath" products, recognizing the dangers with these processing sites and how to safely collect evidence.

The emergence of synthetic cannabinoids and cathinones in the illicit drug market has introduced new challenges to law enforcement and their forensic laboratories. Law enforcement has been raiding retail operations which deal in "spice" and "bath salt" products, but are now encountering processing sites that are responsible for manufacturing these commercial and illicit products. These processing sites may be unfamiliar territory for forensic chemists and law enforcement officers. These processing sites present new challenges due to their differences from a typical clandestine methamphetamine laboratory.

Respondents would be at an advantage knowing what to expect to find at these illicit operations where different chemicals, apparatuses, and potential dangers will be encountered. Furthermore, forensic laboratory and law enforcement personnel must be familiar with processes such as the preparation and application of raw powders and flavorings to plant material. This presentation will provide an overview of these synthetic compound processing sites. Furthermore, the impact of the recent federal scheduling and analogue classifications of these compounds with respect to the processing of these sites will be discussed. Participants will acquire the necessary knowledge to approach, process, and analyze these new illicit laboratories.

The sheer volume of evidence at these processing sites could be overwhelming for law enforcement. Importantly, laboratory personnel must know how to sort through the bulk material for the important items needed for evidence. Challenges that one might face while processing the site will be presented. Since these sites often contain large amounts of suspected drug substances and thousands of packaged items, ways to process the site will also be discussed.

The analysis of synthetic cannabinoids and cathinones can present challenges to the forensic chemist. The continued introduction of new synthetic compounds results in forensic chemists repeatedly encountering unknown spectra. For instance, the active drug ingredient in synthetic cannabinoid samples has changed from JWH-018 to AM-2201 and recently to UR-144 and XLR-11. Matters are further complicated with the addition of synthesis byproducts and isomers (i.e., 3-methylmethcathinone vs. 4-methylmethcathinone) of these unknown compounds. At times, sample preparation to remove impurities becomes crucial to obtain clean spectra for the verified identifications. This presentation will also provide simple steps and tips for the forensic chemist to use in the analysis and identification of these synthetic compounds.

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