



### A183 Herbal Incense and Bath Salts Cases in Harris County, Texas

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After attending this presentation, attendees will learn about the timeline of appearance, case overview, analysis, and reporting of “herbal incense” (cannabinoid receptor agonist) and “bath salts” (methcathinone or pyrovalerone derivative) at the Harris County Institute of Forensic Sciences, located in Houston, TX. Unlike other portions of the Texas Controlled Substances Act (CSA), the subsections referencing these drugs (effective September 1, 2011) are written with broad language. While examples are given in the law for the different types of “herbal incense” and “bath salt” compounds, the list is not all-inclusive. As attorneys have no direct manner of correlating some of these chemical names with the Texas CSA, Harris County Institute of Forensic Sciences (HCIFS) Drug Chemistry Laboratory (DCL) provides additional information on the laboratory reports for these types of results.

This presentation will impact the forensic science community by communicating the analytical experience the DCL has had with regards to these two classes of designer drugs. It is hoped that the case history, compounds encountered, types of exhibits, and methods of reporting may be beneficial to other laboratories and agencies, especially in the Northeastern and Western United States, areas identified by the National Forensic Laboratory Information System (NFLIS) as having very low occurrences of these substances compared to the rest of the country.

The HCIFS DCL received its first encounter with “herbal incense” type substances in May 2010 – a foil pouch of “Space Blend” herbal incense which was found to contain the substance JWH-018. Since then, exhibits have been submitted on a near-exponential frequency in both opened and unopened commercial pouches, unlabeled plastic bags, in hand-rolled cigarettes, and mixed in with marijuana. Around that same time, the DCL also received an exhibit consisting of approximately 25 grams of JWH-018 powder, having an appearance similar to cocaine. Approximately three months later in August 2010, a suspected ecstasy tablet was analyzed by GC-FID, GC-MS, and DART-TOF, and found to contain 3,4-methylenedioxypropylvalerone (MDPV), m-trifluoromethylphenylpiperazine (m-TFMPP), and caffeine, marking the first appearance of a “bath salt” compound at the HCIFS. As of August 2011, the DCL is currently capable of confirming 22 “herbal incense” and six “bath salt” compounds, with others being added as analytical standards become available. The DCL is also able to distinguish between 3- and 4-fluoromethcathinone isomers.

During the 2011 session, the Texas Legislature passed two separate bills relating to these designer drugs, using general language as opposed to an all-inclusive list of substances. Senate Bill 331 authored by Senator Florence Shapiro of Plano, TX, controls herbal incense as “any quantity of a synthetic chemical compound that is a cannabinoid receptor agonist and mimics the pharmacological effect of naturally occurring cannabinoids.” Seven major structural classes are listed, and examples are given for each, listed by systematic name (ex. JWH-018, AM-2201). Penalties for possession are analogous to those of marijuana. House Bill 2118, authored by Rep. Garnet Coleman of Houston, TX, controls bath salts as “any compound structurally derived from 2-aminopropanal by substitution at the 1-position with any monocyclic or fused-polycyclic ring system.” including subsequent modifications. This bill also gives examples of some applicable compounds, listed by chemical name. The language of both bills was based on the general language added to the United Kingdom’s Misuse of Drugs Act in 2010, regarding these substances.

As substances, therefore, may be controlled without being listed by name, when reporting a result containing a cannabinoid receptor agonist, the DCL uses the systematic name and adds the following result statement: “This compound is also known as [chemical name]. It is a cannabinoid receptor agonist classified as a [structural class].” In order to refer to a substance as a “cannabinoid receptor agonist,” the DCL requires peer-reviewed scientific literature on file discussing the compound’s cannabinomimetic properties. Upon reporting a methcathinone or pyrovalerone derivatives, the following statement is added, as appropriate: “This compound is also known as [common name]. It is a structural derivative of 2-aminopropanal.”

#### Designer Drug, Herbal Incense, Bath Salts