

EXPANDED QUALITATIVE SYNTHETIC CANNABINOIDS (K2, SPICE)

Test #	19216
Synonyms	K2, Spice, JWH-018, JWH-073, JWH-250, JWH-122, JWH-398, JWH-200, RCS-4, AM-2201
Specimen Requirements	
Specimen	Aliquot of random or spot urine collection
Volume	10 mL 1.0 mL minimum volume
Handling	Refrigerate; specimen may also be frozen
Assay Parameters	
Methodology	Liquid Chromatography with Tandem Mass Spectrometry (LC-MS/MS)
CPT Code Suggested	82541

The arena of synthetic cannabinonoids is continuously evolving. In March of 2011 the U.S. DEA utilized emergency powers to place 4 synthetic cannabinoids in schedule I of the Controlled Substance Act. As a result, many manufacturers of synthetic cannabinoid products have replaced the active ingredients in their products with other synthetic cannabinoids which are not specifically scheduled by the DEA.

By working with law enforcement, news media outlets, and by testing available product in the MEDTOX Unknown Substance Identification Laboratory, we have ascertained the most common synthetic cannabinoids available today and have developed a urine based test designed to detect their use.

The test detects the use of products containing **JWH 250, JWH-122, JWH-398, JWH-200, RCS-4, AM 2201** as well as **JWH-018** and **JWH-073** by monitoring for specific urinary metabolites of each compound. The procedure utilizes an LC-MS/MS screening procedure; presumptive positive samples are then confirmed utilizing state of the art high performance liquid chromatography coupled with linear ion trap tandem mass spectrometry. Confirmation testing performed following the initial screen results will incur additional charges.

General information of Synthetic Cannabinoids:

Originally developed as pharmacology research tools, most synthetic cannabinoids are not closely related in structure to natural cannabinoid compounds. However, they interact with cannabinoid receptors within the CNS to produce a spectrum of biological activities similar to Δ^9 THC, the primary component in marijuana responsible for the psychoactive properties of the drug. Many synthetic cannabinoids are dramatically more potent than Δ^9 -THC. These powerful compounds are mixed into smoking blends which are often openly sold, masqueraded as potpourri or incense. Little is known about the health ramifications of acute or chronic use of synthetic cannabinoids.

The U.S. DEA list four synthetic cannabinoids as Schedule I Controlled Substances. However, many state and localities have enacted legislation to control additional active compounds. Manufacturers have attempted to circumvent these laws by developing or marketing new compounds which possess similar activity but which may not be specifically controlled.