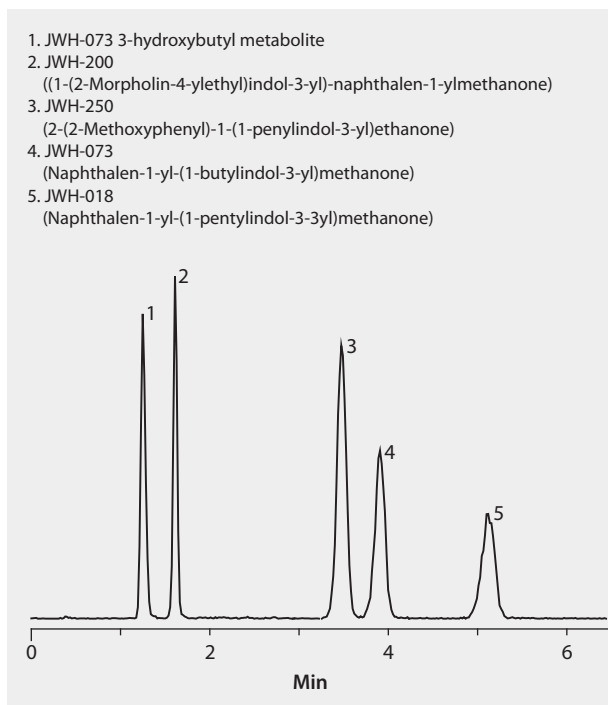


## LC/MS/MS Analysis of Spice Cannabinoids in Plasma on Ascentis® Express 2.7 μm F5 after Solid Phase Extraction (SPE) using HybridSPE®-Phospholipid

Synthetic cannabinoids (Spice) are a relatively new type of designer drug used as a pseudo-legal means to get a cannabis-type high. New synthetic cannabinoids are continually being introduced as suppliers tweak the molecular structures. The ability to rapidly and reliably identify the continually changing population of these compounds in the blood or urine suspected users is a significant analytical challenge facing forensic chemists. A four prong approach using column selectivity, high purity solvents, effective sample prep, and reference standards, was used to develop a method to rapidly isolate and identify Spice cannabinoids from plasma. The Ascentis Express F5 column gave the necessary resolution, and the LC-MS CHROMASOLV solvents and additives gave adduct-free response for maximum sensitivity. Sample prep employing the HybridSPE-Phospholipid was rapid and effective and the Cerilliant reference standards enabled confident identification.

market focus	Forensics and Toxicology
sample/matrix	rabbit plasma, unfiltered K2-EDTA spiked with Spice cannabinoids (5 ng/mL each)
SPE well plate	HybridSPE-Phospholipid, 96-well plate, 50 mg bed wt., 2 mL well vol (575656-U)
sample addition	to each well add 100 μL plasma, followed by a 300 μL of 1% formic acid in acetonitrile, agitate on orbital shaker for 2 minutes
elution	attach collection plate and apply vacuum at 10" Hg for 4 minutes
column	Ascentis Express F5, 5 cm x 2.1 mm I.D., 2.7 μm particles (53567-U)
mobile phase	[A] 10 mM ammonium formate in water, pH 6.8 (unadjusted); [B] acetonitrile; (50:50; A:B)
flow rate	0.3 mL/min
pressure	1296 psi (89 bar)
column temp.	35 °C
detector	MS, ESI(+), MRM, m/z 344/155 (JWH-073 metabolite), 385/155 (JWH-200), 336/121 (JWH-250), 328/155 (JWH-073), and 342/155 (JWH-018)
injection	2 μL
Application No.	G005786



**Components**

JWH-073 3-Hydroxybutyl metabolite solution ([Cerilliant S-037](#))  
 JWH-073 solution ([Cerilliant S-027](#))  
 JWH-018 solution ([Cerilliant S-025](#))

**Related Products**

**analytical column**  
 Ascentis® Express F5, 2.7 Micron HPLC Column ([Supelco 53567-U](#))  
**eluent**  
 Acetonitrile ([Fluka 14261](#))  
 Ammonium formate ([Fluka 14266](#))  
 Water ([Fluka 14263](#))  
**SPE tube or plate**  
 HybridSPE®-Phospholipid ([Supelco 575656-U](#))

**Related Products**

**standard**  
 JWH-018 solution ([Cerilliant S-025](#))  
 JWH-073 solution ([Cerilliant S-027](#))  
 JWH-073 3-Hydroxybutyl metabolite solution ([Cerilliant S-037](#))  
 Spice Cannabinoid Mix solution ([Cerilliant S-038](#))