


# Synthetic Cannabinoid-1 Assay

**The 1st commercially available Homogeneous Enzyme Immunoassay**
for the detection of synthetic cannabinoids and their metabolites in urine.

## Assay Characteristics

- **Qualitative determination of synthetic cannabinoids in urine**
- **Antibody identifies naphthoylindole metabolites**
- **Detection of the majority of synthetic cannabinoid compounds, e.g.JWH-018, JWH-073, AM-2201 and their free and conjugated metabolites**
- **Liquid, ready-to-use reagents, calibrators and controls – no need for reconstitution**
- **Application protocols for all major clinical chemistry analysers**
- **Packaging tailored for your laboratory's needs**


## Background

For the past several years, smokeable herbal mixtures known under various brand names, mostly as 'Spice' or 'K2', have become easily accessible on the Internet and in various specialised shops. Their content design implies that their psychotropic, cannabis-like effect is caused by special natural and 'exotic' herbs such as Beach Bean, Blue Lotus Flower, Dwarf Skullcap, Skullcap Indian Warrior, Indian Lotus and the like.
In reality, the psychotropic effects are induced by synthetic cannabinoids such as JWH-018 (1-pentyl-3(1-naphthoyl)indole) and its analogues that have been added to the herbal mixtures. These synthetic substances act as full agonists at both the CB1 and CB2 cannabinoid receptors of the Endocannabinoid System (ECS), thus mimicking the psychoactive effects of cannabis (THC = Δ9-tetrahydrocannabinol). Synthetic cannabinoids have been developed over the past 40 years as potential pharmaceutical agents in pain management. However, most of the synthetic cannabinoids are by far more potent than THC, in some case up to 800 times. Because of the resulting high potential of abuse, "Spice" products have become illegal in most countries, thus creating a need to screen for these substances.

With the 1st Homogeneous Enzyme Immunoassay for Synthetic Cannabinoids, Immunalysis and Specialty Diagnostics provide a means to help stay ahead of the rapidly changing development of new designer cannabinoids.

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## Cross-Reactivities

| **Analyte** | **Concentration** (ng/mL) | **Cross-Reactivity** (%) |
|---|---|---|
| JWH-018 Pentanoic Acid | 20 | 100 |
| JWH-018 N5 Hydroxypentyl | 18 | 111 |
| JWH-018 4-Hydroxyindole | 125 | 16 |
| JWH-018 4-Hydroxyindole | 80 | 25 |
| AM-2201 N4-Hydroxypentyl | 18 | 111 |
| AM-2201 6-Hydroxyindole | 25 | 80 |
| JWH-073 N4 Hydroxybutyl | 20 | 100 |
| JWH-073 6-Hydroxyindole | 18 | 111 |
| JWH-073 N-Butanoic Acid | 20 | 100 |
| JWH-007 | 40 | 50 |
| JWH-015 | 30 | 67 |
| JWH-018 | 25 | 80 |
| JWH-019 | 25 | 80 |
| JWH-022 | 30 | 67 |
| JWH-073 | 25 | 80 |
| JWH-081 | 4 500 | 0.4 |
| JWH-122 | 150 | 13.3 |
| JWH-200 | 25 | 80 |
| JWH-201 | 100 000 | < 0.05 |
| JWH-250 | 2 500 | 0.8 |
| JWH-398 | 350 | 5.7 |
| AM-2201 | 25 | 80 |
| 3-(1 naphthoyl)1-H-indole | 25 | 80 |

## Ordering Information

| **Reagents** | **Size** | **Order No.** |
|---|---|---|
| K2 (Synthetic Cannabinoids-1) Assay | 25 mL | 344-0025EX |
| | 60 mL | 344-0060WEX |
| | 100 mL | 344-0100EX |
| **Calibrators** | | |
| JWH-018 Pentanoic Acid Calibrator, 20 ng/mL | 1 x 10 mL | 10004EX |
| JWH-018 Pentanoic Acid Calibrator, 10 ng/mL | 1 x 10 mL | 10005EX |
| **Controls** | | |
| JWH-018 Pentanoic Acid Urine Control Set, 10 ng/mL Low & 30 ng/mL High | 2 x 10 mL | 3002EX |
| JWH-018 Pentanoic Acid Urine Control Set, 5 ng/mL Low & 15 ng/mL High | | |

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