

The synthetic cannabinoids: JWH, four years of analysis

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Introduction

Since 2004 herbal mixtures for smoking use have been sold under the generic brand "Spice" and more recently as "Legal highs". Many of them contain synthetic cannabinoids. JWH-018 was one of the first spice drugs. "Legal Highs" were sold mainly in herbal form and as a legal substitute of cannabis.

There is no scientific evidence of their effects on humans, except cases of intoxications and users opinions. An important difference between THC and the synthetic cannabinoids is that they are mainly full agonist of the cannabinoid receptors, being more potent and unpredictable than the THC-cannabis (Seely et al. 2012; Kemp et al. 2015; Mills et al. 2015).

Objective

The present study describes the presence of the JWH class of synthetic cannabinoids and their characteristics in the samples delivered for analysis to the harm reduction NGO Energy Control from 2010 to 2014 in Spain.

Methods

From 15,814 samples analyzed from 2010 to 2014 those containing synthetic cannabinoids JWH were studied (n=47). Analysis was done by Gas Chromatography–Mass Spectrometry.

Results

From these 47 samples containing JWH, 55% were delivered as "legal highs" (n=21) and 44% as JWH. Most common presentations were powder 47% and herbals 32%.

Content of samples delivered is described in [graph 1](#). Different types of JWH were detected: 28% (13) JWH-018, 11% (5) JWH-210, 8% (4) JWH-081 and the 6% JWH-250(3). It was also detected other synthetic cannabinoids ([graph 2](#)).

Deliverers' of JWH's were 49% male (23) and 6% female (3); 46% unknown (21). Origin of the sample was Catalunya 23% (11), other provinces of Spain 46% (22); other EU countries 23% (11) and internet-unknown countries 8% (8).

A 12% of the samples were delivered in 2010, 23% in 2011, 34% in 2012, 31% in 2013, and 12% in 2014.

Graph 1. Content of samples delivered (n:47)

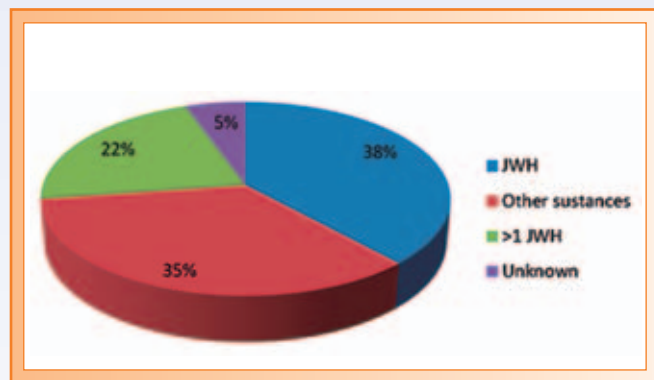
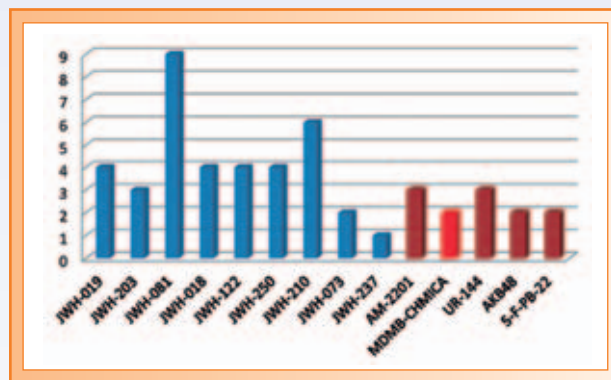


Table 2. Substances found



Conclusions

JWH class represent a low percentage of new psychoactive substances analyzed. Its presence in the market seems decreasing. Even though these "legal highs" effects are described as marijuana-like after smoking or ingestion, the health implications are not entirely characterized. The analyses reveal that some compounds may exhibit higher potency and affinity for cannabinoid receptors.

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