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#### KRONIC AND OTHER PRODUCTS CONTAINING SYNTHETIC CANNABINOIDS - "HERBAL HIGHS"

#### **Products**

"Kronic" is the best known brand name in Australia for a range of materials often referred to as herbal smoking mixtures. These smoking mixtures usually contain a plant or herbal material to which has been added one or more drugs (synthetic cannabinoids – see below) which mimic the effects of tetrahydrocannabinol (THC), the active constituent of cannabis (marijuana). These materials are intended to produce effects similar to the smoking of cannabis and to circumvent the laws on the sale, possession and use of illegal drugs.

Smoking mixtures sold in Australia include K2, Puff, Voodoo, Kaos, Spice, Hush, Jungle Fever and many others

### Synthetic Cannabinoid (SC)

These substances were originally produced in laboratories for research purposes. There are literally hundreds of SCs, some of which are much more potent than THC itself. The best known group is the JWH series and the most common drugs in this group are JWH-018, JWH-073, JWH-200 and JWH-250. Other groups are the HU, CP, RCS, AM, WIN, XLR and UR series of which the most common members are HU-210, CP47,497, RCS-4, AM2201, WIN 55,212-2, XLR11 and UR-144.

# Legality

When these drugs first appeared they were not illegal or prohibited by Australian drug laws and were sold openly in bong shops, adult shops and other outlets. However, state and federal authorities have moved to list 21 such substances as illegal drugs. These are: AM-2201, CP 47,497, CP 47, 497 C8, JWH-015, JWH-018, JWH-019, JWH-073, JWH-081, JWH-122, JWH-200, JWH-201, JWH-203, JWH-250, JWH-302, JWH-398, RCS-4, RCS-8, RCS-4(C4) and Win 48098.

In some states, however, the wording of the drug laws is such that any other substances related to the named SCs are also deemed to be illegal drugs which makes virtually all of the SCs illegal.

## **Testing for SCs**

SCs can be detected in urine, blood and oral fluid using sophisticated laboratory tests based on Liquid Chromatography Mass spectrometry (LCMS) and Gas Chromatography Mass spectrometry (GCMS). These methods are relatively expensive and may take 1-2 days for a result to be obtained. However the results of these testing methods are very specific and are regarded as definitive for legal purposes. All of the currently named illegal SCs can be detected together with a number of others.

Recently, relatively rapid and simple on-site tests have been developed for SCs using the same principles as the on-site tests currently used for the detection of other illegal drugs such as amphetamines, opiates, cocaine and THC in urine and oral fluid samples.

These tests, however, are very limited in their capacity to detect SCs and generally only a few of the most common SCs can be detected. These tests are not definitive identification methods and provide only an indication of drug presence. False positive and negative results are often obtained. None of the devices come close to meeting the sort of validation criteria which apply to on-site urine testing devices for other illegal drugs.

At present there are no generally accepted cut-off levels for synthetic cannabinoids in urine or oral fluid to determine whether a sample is positive or negative as is done for the other illegal drugs.

David Batty

Laboratory Director

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