what are cannabinoids and synthetic cannabinoids?

‘Cannabinoids’ are chemicals found in cannabis that are unique to the plant. The most well-known and researched of these, delta-9-tetrahydrocannabinol (∆9-THC), is the substance primarily responsible for the psychoactive effects of cannabis.

‘Synthetic cannabinoids’ are functionally similar to THC. Like THC, they bind to the same cannabinoid receptors in the brain and other organs. In recent years, a wide variety of synthetic cannabinoid products have been made available as smoking mixtures that are sold on the internet and in various specialised shops in some parts of the world. These products are usually sold in foil sachets, typically containing 1-3 grams of dried plant matter to which one or more of the cannabinoids have been added. It is believed that a solution of the powdered chemical cannabinoids are diluted in acetone and sprayed onto whatever plant matter is available. A number of plant-based ingredients are often listed on the packaging, but scientific testing has found that many of these are not actually present.

Almost a decade ago in Europe, a range of products known as ‘Spice’ were introduced and sold as a legal herb-based alternative to cannabis, for example, Spice Silver and Spice Diamond. Since the Spice brand first appeared, a large number of competing products made by other manufacturers have also become available.

In Australia, as in other parts of the world, synthetic cannabis is usually sold via the Internet, in addition to specialist adult stores or tobacconists (where they were initially available legally (see further section on legal status)). ‘Kronic’ is perhaps the best known of these and has received a great deal of media attention in recent times. Other such products available in Australia that contain synthetic cannabinoids include Kalma, Marley, K2, Northern Lights, Voodoo, Kaos and Mango Kush.

are synthetic cannabinoids safe?

There have been a range of adverse side effects associated with synthetic cannabinoid products including nausea, anxiety, paranoia, brain swelling, seizures, hallucinations, aggression, heart palpitations, and chest pains. In 2015, there were two deaths in Queensland reportedly associated with use of synthetic cannabis.

Synthetic cannabinoids are often classified as ‘research chemicals.’ This is because they were developed by groups of chemists to inject into animal brains in tiny amounts to study the cannabinoid system. Research chemicals are experimental chemicals that are not approved for human consumption. The vast majority of these chemicals have only been recently synthesized and little, if any, data exists currently about their side effects, adverse reactions, long-term damage, or dependence potential. Most importantly, there is no officially published safety data, and almost nothing is known about their effects on humans.

Based on the information available, it can be assumed that different amounts or combinations of synthetic cannabinoids are added to the range of products (made of plant material). This is done to produce the cannabis-like effects that potential users are seeking. Media stories from Europe suggest some of the synthetic cannabinoid products currently available have been produced in Asia (e.g. China), but it remains unclear where and how the actual production of the herbal mixtures, the synthetic cannabinoids and their addition to the herbal mixtures takes place.
what are the laws about synthetic cannabinoids in Australia?

It is illegal to use synthetic cannabinoids throughout Australia. In 2011, the Commonwealth classified eight synthetic cannabis-like substances as prohibited throughout Australia, including them in Schedule 9 (Prohibited Substances) of the Standard for the Uniform Scheduling of Medicines and Poisons. These restrictions still allow access to these substances for use in strictly-controlled medical and clinical studies to allow for appropriate investigation of any potential future therapeutic uses.

In May 2012, the Therapeutic Goods Administration included a general entry for ‘synthetic cannabinomimetics’ not otherwise specified in Schedule 9 (Prohibited Substances). This entry was intended to limit the ‘new legal mixes’ of synthetic cannabinoids that were not already covered in Schedule 9, and to stop the need for ongoing urgent scheduling as new synthetic cannabis-like substances emerge.

Along with the Commonwealth’s decision on national scheduling of synthetic cannabinoid analogues and synthetic cannabinomimetics, each state has also taken action to place bans on the possession and sale of products containing these substances within their own jurisdictions.

Western Australia
In June 2011, the Western Australian Government became first state to announce ban on the possession, sale or intent to supply of seven synthetic cannabinoids including Kronic, Spice, Kaos Voodoo, Mango and Northern Lights. These substances were then added to the Poisons Act 1964.

Queensland
In 2011, the Queensland Government announced a ban on synthetic cannabinoids under the (QLD) Drugs Misuse Act. Queensland then added 35 new synthetic drugs to Schedule 2 of the Drug Misuse Act in 2013.

Australian Capital Territory
Following the Therapeutic Goods Administration (TGA) scheduling of eight synthetic cannabinoids, the ACT adopted the changes under local medicines laws. It then became illegal to manufacture, obtain, possess, supply, sell and/or use products containing synthetic cannabis in the ACT.

New South Wales
Following an earlier temporary ban on synthetics, 45 new psychoactive substances (including synthetic cannabinoids, 2C-X and NBOMe) were added to the list of prohibited drugs in the Drug Misuse and Trafficking Act in September 2013. This included threshold quantities for trafficking offences.

South Australia
South Australia announced a ban on the possession, sale or intent to supply of seventeen synthetic cannabinoids including Kronic, Spice, Kaos Voodoo, Mango and Northern Lights in 2011. The Controlled Substances Advisory Council then evaluated the harmful properties of synthetic cannabinoids. The council ruled that the harmful effects were similar to those of cannabis and therefore supported their inclusion in the Controlled Substances (General) Regulations 2000 (using the same threshold quantities as for cannabis).
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Victoria
In 2011 Victoria added eight synthetic cannabinoids and five synthetic stimulants (including MDPV, 4-MMC/mephedrone and BZP) permanently to the list of prohibited substances, Schedule 11 of the Drugs, Poisons and Controlled Substances Act 1981. The 8 synthetic cannabinoids had previously been temporarily banned for 12 months.

Northern Territory

Tasmania
In 2011, the number of banned drugs was increased under the Controlled Drugs, Controlled Precursors and Interpretation under the Schedule of the Misuse of Drugs Act 2001. This ban was extended to include synthetic cannabinoids including Kronic and Spice, and the number of controlled precursors under the act increased from 13 to 53.