

Dalgarno
INSTITUTE



Drugs by Design - Legal Highs? N.P.S overview



DEREK STEENHOLDT

A synoptic report on the ever morphing and consistently difficult to 'pin down' Novel Psychoactive Substances (NPS). Using data and commentary collected from currently available sources.

Dalgarno Institute

www.dalgarnoinstitute.org.au

1300 975 002

research@dalgarnoinstitute.org.au

9 / 1 / 2 0 1 2

NPS (Novel Psychoactive Substances) – “Designer Drugs – Legal Highs”

Worldwide, there are dozens of synthetic drugs being created each year and sold to unsuspecting consumers seeking a ‘buzz/trip’ (mind/emotion altering experience). But the consequences of using these substances are death or serious harm and permanent damage to people’s lives.

Miami 'zombie' attacker may have been using 'bath salts'

“A naked man who chewed off the face of another man in what is being called a zombie-like attack may have been under the influence of “bath salts,” Larry Vega witnessed the attack “The guy was like tearing him to pieces with his mouth, so I told him, ‘Get off!’” Vega told WSVN. “You know it’s like the guy just kept eating the other guy away, like ripping his skin.” “It was just a blob of blood,” WSVN quoted Vega as saying. “You couldn’t really see, it was just blood all over the place.” Vega said he flagged down a passing police officer. “When the officer approached him, told him to stop, pointed a gun at him, he turned around and growled like a wild animal and kept eating at the man’s face,”¹

Often given the spurious title of ‘legal highs’, these are basically a range of substances that so-call ‘mimic’ current illegal drugs. The range of these products can be from anything such as supermarket available ‘caffeine loaded’ drinks i.e. ‘Red Bull’ and ‘Mother’ to internet sourced and (until recently legally) accessible products, including ‘plant fertiliser’ and even synthetic forms of current illicit drugs such as Cannabis.

Examples of NPS or Designer Drugs:

Examples of names for newly manufactured substances with similar effects to existing illegal drugs include : Krokodil, Crunk, Drunken Gummies, Hand sanitizer, Synthetic Cannabinoids, Khat, Ivory Purple Wave, Vanilla Sky, Bliss, White, Rush, Blow, Red Dove, Aura, Zeus 2 Zoom, White Dove, Wave, Blue Silk, White Lightning, Ocean, Charge, Cosmic Blast Scarface, Hurricane Charlie, Cloud 9, Pure Ivory plus many others.

Some drugs are designed to imitate known illicit drugs. For example:

- × Synthetic Cannabis: *Names* – ‘Kronic’, ‘Spice’, ‘K2’, Kaos, Voodoo, Mango and Northern Lights, ‘Kronic Black Label’
- × Synthetic Ecstasy: *Name* – ‘Exotic’
- × Synthetic Hallucinogens: *Names* – ‘Dragonfly’ (BDF) ‘Bath salts’ (‘Charge’, ‘Wave’)
- × NPS Stimulants: *Names* – Mephedrone (‘Meow –Meow’), Designer Cocaine (‘glass cleaner’)

Details of some of these NPS or Designer Drugs and actions which countries are taking to protect their people from the serious harm to health and risk to life itself that these substances can inflict are provided in the section below.

“Natural High” substances:

Another category of substances not necessarily synthetically manufactured are many of the legal high products which contain naturally occurring herbal and plant supplements. These are best avoided.

As far back as 2010, the US Consumer Report Magazine reported on 12 “nutritional” supplements which should be avoided based on research undertaken by the Natural Medicines Comprehensive Database, an independent research group that evaluates the safety and effectiveness of nutritional supplements. ²

In these “natural” products, whilst each of the ingredients do not pose great danger of itself, when combined they tend to increase the potency and potential harmful side effects of each substance.

“Exotic” is one example of a product clearly being marketed as being close to an ecstasy tablet which is made up of ingredients which individually do not pose great danger. However, when combined with the other legal substances mentioned potency and harmful effects are increased.

The danger is that it claims to be legal, but notice that there is no claim of it being safe!

Quoting directly from the advertisement:

“As close as you'll get without breaking the law. This is a feel good lovey dovey party pill with rushes. This pill will offer an enhanced mood deviation giving a chatty euphoric buzz with no next day "hangover". Legal Party Pills Australia rates this 8.5/10

Ingredients: Anhydrous Caffeine, Herbal extracts including Citrus Aurantium, Theobroma Cocoa, Pelargonium Graveolens, Salvia Sclarea, Hordeum Vulgare, Ascorbic Acid and Tableting Aids.”



In fact a closer look at four of the ingredients will show that it is anything but safe **in combination**.

1. Anhydrous Caffeine

Caffeine is a known stimulant and has many adverse side effects when consumed excess. It is considered to be an addictive substance and is monitored by the Australian Government Alcohol & Drug Information Service (ADIS). Many of the legal high products contain Anhydrous (waterless) Caffeine as well as Citrus Aurantium (bitter orange) in their ingredients list.

2. Citrus Aurantium

Bitter Orange which contains Synephrine which is similar to the banned substance Ephedrine, is thought to be riskier when taken with caffeine. ³

3. Theobroma Cocoa

They also contain Theobroma Cocoa which is a substance found in the Cocoa bean. Theobromine is very similar to caffeine in that they are both alkaloids, however Theobromine has a lesser effect on the central nervous system compared caffeine to but stimulates the heart to a greater degree than caffeine thus causing high blood pressure in sufficient quantities. ⁴

4. Pelargonium graveolens

Also known as geranium (the flower) which contains 'Methylhexanamine' a substance added to the prohibited list of the World Anti Doping Agency in 2010. It is a stimulant but not as powerful as amphetamines or ephedrine. ^{5,6}

Some NPS (Novel Psychoactive Substances) or Designer Drugs in detail and National actions being taken to protect people.

See below, details of the harms some of these NPS or Designer Drugs inflict on users and information on what is being done about the problem of such dangerous substances being considered "legal". Acknowledgement is given to a presentation given by Donald W. Reid 2012 entitled: "The New High: Designer Drugs and New Trends" as a key source for the following information on Novel Psychoactive Substances.

- 'BATH SALTS'
- SPICE
- DEVIL'S BREATH
- SMILES
- CHEESE
- KROKODIL
- DRAGONFLY
- CRUNK
- WEED BUTTER
- HAND SANITIZERS
- KHAT
- SYNTHETIC CANNABIS

BATH SALTS: What are they?

They are NOT the traditional bath salts, like Epsom salts, used legitimately for water softening or aroma therapeutic purposes. They are manufactured so as to include a central nervous stimulant used as a recreational drug, but in many cases the active chemical is slightly altered so it does avoid being classified as "illegal". These substances are marketed as "bath salts", "glass cleaner" or sometimes "plant food", not for human consumption to avoid being prohibited under existing regulations. They are popular among teens and young adults.

They contain man-made chemicals such as: methylenedioxypropylamphetamine (MDPV), Mephedrone (4-MEC) and Methylone and are usually in a powder and crystal form that crumbles easily. The powder is typically white to light brown in colour, has a slight odour and sold 50 mg to 500 mg packets or containers labelled "Not for human consumption".

Experts who have studied these drugs estimate that there are more than 100 different bath-salt chemicals circulating. The compounds can mimic the effects of cocaine, LSD, and methamphetamine.⁷

BATH SALTS: How are they taken?

- Snorted (most common)
- Injected
- Smoked (similar to crack)
- Mixed with food
- Mixed with drink
- Airborne mist

BATH SALTS: How do they mess you up?

"Bath salts" are essentially cheaply-made super-charged speed that ramps users up like a mixture of cocaine and methamphetamine. When consumed, they make the user a danger to everyone, including themselves. These drugs have been linked to a string of grisly attacks.⁸

SIGNS/SYMPTOMS

- Extreme paranoia, hyper-alertness and confusion
- Psychotic features (reporting seeing demons, monsters, foreign soldiers, or aliens)
- Violent behaviour (Users often cannot be subdued with pepper spray or Tasers)
- Tachycardia (rapid heartbeat), Chest pain, High blood pressure, Sweating

EFFECTS

- Users have a "High" similar to cocaine, methamphetamines, MDMA (Ecstasy) or LSD
- The initial euphoria lasts 3-4 hours
- Psychosis and suicidal thoughts are not uncommon.

BATH SALTS: How do they mess you up long term?

These drugs are so new that long term effects remain unknown.

They are cited as an **"imminent threat to public safety"** by the US Drug Enforcement Agency.

SPICE: What it is

"Spice" is used to describe a diverse family of herbal mixtures marketed under many names, including Kronic, K2, fake marijuana, Yucatan Fire, Skunk, Moon Rocks, Kaos, Voodoo, Mango and Northern Lights, 'Kronic Black Label and others.

These products contain dried, shredded plant material and presumably, chemical additives that are responsible for their psychoactive (mind-altering) effects. While Spice products are

labelled “not for human consumption” they are marketed to people who are interested in herbal alternatives to marijuana (cannabis). Spice users report experiences similar to those produced by marijuana, and regular users may experience withdrawal and addiction symptoms.

SPICE: How it is used

Spice is abused mainly by smoking. Sometimes Spice is mixed with marijuana or is prepared as an herbal infusion for drinking.

SPICE: How It messes you up

A variety of mood and perceptual effects have been described, and patients who have been taken to Poison Control Centres in the US report symptoms that include rapid heart rate, vomiting, agitation, confusion, and hallucinations.

While Spice products do contain dried plant material, chemical analyses of seized spice mixtures have revealed the presence of synthetic (or designer) cannabinoid compounds.* These bind to the same cannabinoid receptors in the body as THC (delta-9-tetrahydrocannabinol), the primary psychoactive component of marijuana. Some of these compounds, however, bind more strongly to the receptors, which could lead to a much more powerful and unpredictable effect. Notably, these compounds have not been fully characterized for their effects and importantly, their toxicity, in humans.⁹

For more information on Spice and Spice-like products, see Understanding the ‘Spice’ phenomenon, which was produced by the European Monitoring Centre for Drugs and Drug Addiction: <http://www.emcdda.europa.eu/publications/thematic-papers/spice>.

DEVIL’S BREATH: What it is

Devil’s Breath (Chemical Name: Scopolamine), is odourless and tasteless. It is derived from a particular type of tree common to South America. The chemicals from the plant are so potent that mothers warn their children not to play or sleep under the shade of the trees when they are in flower.

DEVIL’S BREATH: How it is used and how it can mess you up.

A drug dealer in the capital of Bogota, said the drug is frightening for the simplicity in which it can be administered. He states that Scopolamine can be blown in the face of a passer-by on the street, and within minutes, that person is under the drug’s effect. ‘You can guide them wherever you want,’ he explained. ‘It’s like they’re a child.’

One gram of Scopolamine is similar to a gram of cocaine, but in high doses, it is lethal. The drug, he said, turns people into complete zombies and blocks memories from forming. So even after the drug wears off, victims have no recollection as to what happened. Scopolamine is often used by people addicted to cocaine as a cheaper alternative.

SMILES: What it is

"Like all the 2C drugs, Smiles is a psychoactive, hallucinogenic chemical that alter the brain's balance of dopamine and serotonin. Smiles is particularly powerful, binding to serotonin receptors in the brain at 20 times the rate of another drug used in schizophrenia research, according to an experiment performed by Purdue University chemists."

Brian Alexander, NBC News.com October 3, 2012,

How is it used:

It can be in powder or table form or 'blotter stamps' or paper.

It is easily soluble in alcohol and can be so in water, so easy to 'slip' to someone. It can also be inhaled.

How it works:

2C-I inhibits the reuptake of monoamines, which include dopamine, norepinephrine, and serotonin - though exerts its predominant inhibition on serotonin and norepinephrine. In comparison to other members of the '2C' series of methoxylated phenethylamine derivatives, Nagai et. al. observed that 2C-I is slightly less potent at inhibiting serotonin reuptake than 2C-E and 2C-C, but more potent than both 2C-E and 2C-C at inhibiting reuptake of norepinephrine. [1]. <http://www.drugs-forum.com/forum/showwiki.php?title=2C-I>

It has been likened to a cross between LSD and MDMA acting as both hallucinogen and stimulant... bad combination of two bad substances.

SMILES: How It messes you up

"Witnesses described the 17-year-old boy as "shaking, growling, foaming at the mouth." According to police reports, Elijah Stai was at a McDonald's with his friend when he began to feel ill. Soon after, he "started to smash his head against the ground" and began acting "possessed," according to a witness. Two hours later, he had stopped breathing."

<http://shine.yahoo.com/healthy-living/2c-smiles-killer-drug-every-parent-know-234200299.html> 20/9/12

Symptoms of using include:

- Nausea and vomiting
- Headache
- Hallucinations
- Convulsions and seizures
- Disorientation
- Violent actions
- Can last up to 8 hours

Symptoms of withdrawal:

(which may begin within a few hours of use and last five or six days)

- Not a lot of data available on these at time of compiling this paper.

CHEESE: What it is

Cheese, Chees, Cheez, Chez, Chz, Queso, Keso, Kso,...

Manufactured from black tar heroin plus Xanax plus Tylenol PM capsules. These three ingredients are combined to form a brown powder (“Cheese”) Highly addictive and very dangerous. It is commonly packaged in a small paper bindle or zip lock bag and can be bought for as little as \$2 a “bump” or \$10 a gram. Popular amongst young users as a cheap alternative to heroin.

CHEESE: How it is used

The tan-colored powder is usually snorted through the nose with a tube, straw, or small ballpoint pen

CHEESE: How It messes you up

Symptoms of using include:

- Drowsiness and Lethargy
- Euphoria
- Excessive Thirst
- Disorientation
- Sleepiness and Hunger
- Sudden change in grades & friends

Like heroin, Cheese is a central nervous system and respiratory depressants. Either an overdose or use in combination with other depressants (e.g. alcohol) can cause respiratory arrest and subsequent death.

Symptoms of withdrawal:

(which may begin within a few hours of use and last five or six days)

- Mood Swings
- Insomnia
- Headache, chills, nausea, vomiting
- Muscle Spasms/bone pain
- Anxiety, agitation, disorientation

KROKODIL: What is it?

Krokodil (Chemical name: Desomorphine) was invented in 1932 in the United States Nick names for Krokodil include: Walking Dead, Crocodile, Krok, Zombie Drug

A derivative of morphine, it has sedative and analgesic effects and a short half-life in the body. It is around 8-10 times more potent than morphine but a cheaper alternative to heroin costing \$6 to \$8 per injection.

The drug is easily made from codeine, iodine, lighter fluid, industrial cleaning fluid, paint thinner, gasoline and red phosphorus in a laboratory similar to the process of making Meth from pseudoephedrine. Desomorphine processed this way is highly impure and contaminated with various toxic and corrosive by-products

This drug is primarily used by heroin addicts that can no longer afford heroin as it is available in the market for a greatly reduced price. It first appeared in Siberia and East Russia in 2002. In 2012, Russia is believed to have over 1,000,000 drug addicts that are believed to be using krokodil or related homemade drugs (DEA Monitoring Krokodil - Fox News).

Unfortunately, in 2011 the drug also made its way into the European Drug Market.

KROKODIL: How it is used

The drug is injected into a vein in the hand, arm, leg, or groin area

- Can lead to amputation of limbs

KROKODIL: How It messes you up

Krokodil is a neurotoxin that causes brain damage.

Small lumps begin to appear around the injection site followed by scaling and discoloration of flesh (red, black, brown, green, grey). The skin scales up, tissue rots and starts to deteriorate and peel off.

It is named for its scale-like appearance of the skin on its users where they have injected the drug. It has become notorious for producing severe tissue damage. It can also cause phlebitis (inflammation of a vein caused by a blood clot) and gangrene, sometimes requiring limb amputation in long-term users.

It is also known to cause deterioration of internal organs (Kidney / Liver). In fact the amount of tissue damage is so high that addicts' life expectancies are said to be as low as two to three years.

Heroin detox lasts a week to ten days BUT withdrawal from desomorphine can take an agonizing MONTH!

DRAGONFLY or B-FLY: What is it?

Also known as Bromo-Dragon Fly, B-FLY, 2C-B-FLY or simply FLY, its chemical name is Bromo-benzodifuranylisopropylamine, and it is related to the phenethylamines drug group. B-Fly is a long-lasting hallucinogenic drug, sometimes lasting up to 3 days, and sometimes referred to as "a ride to the moon" due to its long lasting effects, which leaves users drained.

B-FLY is an extremely potent hallucinogenic drug, similar to that of LSD, but not as potent. It was first synthesized in the laboratory in 1998 when researchers were seeking new drugs to treat Parkinson's disease and schizophrenia. It has virtually no human use history, as is the case with most designer drugs. B-FLY has been found in several forms, pressed tablets

(less often), powder or liquid which is placed on blotter paper, which is the most common form of use.

Monitoring internet availability of "legal highs" substances show that in the United States there were over 30 online shops selling "legal highs" in 2010 and in 2011 there were over 60. In the United Kingdom there were 20 online shops in 2010 and nearly 80 in 2011.

Ashland Police seized a small dropper bottle containing approximately 3 millilitres of a clear, colourless liquid in 2007. The substance was thought to be DOB, but analysis later determined it to be bromobenzodifuranylisopropylamine or Bromo-DragonFLY.

B-FLY: How it is used

B-Fly is sometimes taken in combination with other drugs such as:

1. LSD,
2. Cannabis,
3. 2C-B,
4. Ketamine,
5. Methylone,
6. Amphetamines
7. Alprazola,
8. Cocaine
9. Kratom
10. Alcohol

B-FLY:How It messes you up

B-Fly is very toxic and the risk of overdose is high. B-Fly has effects similar to LSD, but the effects last much longer. Effects after orally ingesting the substance can be delayed for as long as 6 hours which may lead to "double dosing" and an overdose.

There are no current legitimate medical uses for B-Fly. It is sometimes sold as LSD which is sold on blotters and has similar effects to LSD. There is little known about the pharmacological characteristics of B-Fly, but evidence that it has vasoconstrictive properties in humans. B-Fly is known to be a serotonin agonist, or that binds to the serotonin cell and triggers a response.

CRUNK: What is it?

Crunk Now, the newest fad includes a "high" created right at home from ingredients that can be found in any medicine cabinet and refrigerator in your own home.

It's called a Crunk Concoction, and it's a deadly juice that teens are downing in the hopes of getting high. In January 2012, a Hawaii man, Chucky Dias Oliveira made the headlines after he died in his sleep after drinking the concoction called "Crunk."

CRUNK: How it is used

Crunk is referred to in rap music and urban slang. It means a lot of things, including a drink that mixes soda or other beverage with an over-the-counter cough syrup and crushed prescription pain killers.

CRUNK:How It messes you up

Crunk produces an intense rush that's proven dangerous. A "Crunking high" can cause blackouts and breathing problems. It slurs speech and motor skills. A lot of prescription

drugs act like narcotics. They're central nervous system depressants, so it slows down the heart and the central nervous system.

Drinkers report experiencing a sense of whoozy euphoria, one that can be incredibly addictive, not to mention deadly.

Overdoses can lead to difficulty breathing, loss of consciousness and death. And prolonged exposure to the painkillers can do lasting damage to one's liver and other organs.

WEED BUTTER: What is it?

Weed Butter also known as Cannabutter, according to those that post in the online forums, is a much safer method to ingest marijuana than smoking it. To make "weed butter," marijuana is mixed with regular butter and brought to a boil which causes the Tetrahydrocannabinol (THC) to bond with the butter. This so-called 'bonding' is supposed to make the THC more potent. The roughage (i.e. stems, leaves and buds) is then strained out, and the liquid is cooled and stored as butter.

WEED BUTTER: How it is used

"Weed butter" is used for baked goods, brownies, cakes, etc, which are either sold or consumed by the individual.

HAND SANITIZERS

HAND SANITIZERS: How are they abused?

Liquid hand sanitizer is 62 to 65 percent ethyl alcohol, or ethanol, the main ingredient in beer, wine and spirits, making it 120-proof. To compare, a bottle of vodka is 80-proof.

HAND SANITIZERS: How do they mess you up?

A few swallows is all it takes to get a person to experience the intoxicated effects of alcohol. Doctors said ingesting hand sanitizer can produce the same side effects as consuming large amounts of alcohol – slurred speech, unresponsiveness, possibly falling into a coma state. Long-term use could lead to brain, liver and kidney damage.

KHAT: What is it?

Khat is a flowering shrub native to northeast and east Africa and the Southern Arabian Peninsula. Cathine, a Schedule IV drug and Cathinone, a Schedule I drug, are Khat's two active ingredients. Khat is a slow-growing shrub that grows to 1.5 meters tall, depending on the area and rainfall, with evergreen leaves 5-10 cm long and 1-4 cm broad.

KHAT: How is it used?

The stimulant effect of Khat is most effective when the leaves are still fresh. Khat is consumed orally as a tea; chewed into a paste; and sometimes smoked or sprinkled on food. The leaves, twigs, and shoots of the Khat shrub are most commonly chewed and stored in the cheek, as is commonly done with loose tobacco.

KHAT: How it messes you up

After ingesting Khat, the user experiences an immediate increase in blood pressure and heart rate. Symptoms of toxicity include delusions, loss of appetite, and difficulty with breathing. According to the National Drug Intelligence Centre, the effects of Khat generally begin to subside between 90 minutes to three hours after ingestion; however, effects of the active ingredients can last up to 24 hours. More recent research and testing have found that the shelf life is not limited, and cathinone remains active in the dried Khat after months of being harvested.

Since synthetic cannabinoids are several times more potent than marijuana, the adverse effects after ingesting the product can cause hallucinations, anxiety, heightened blood pressure, nausea, vomiting, and in severe cases, tremors and seizures.

KHAT: How it messes you up- long term

There are few studies indicating what – if any – long term effects exist. In addition, common field test kits, canines, and routine urine tests do not detect cannabinoids, making it difficult for law enforcement to detect its presence.

SYNTHETIC CANNABIS (or SYNTHETIC CANNABINOIDS): What is it?

Synthetic cannabis is usually made from medicinal herbs like dimiana, sprayed with psychoactive chemicals, and is reported to have a cannabis-like effect when smoked.

“7H”, “K2”, and “Spice” are products containing synthetic cannabinoid chemicals resembling THC, the primary element in marijuana. It is sprayed or added to dried plant material to create herbal smoking products and blends, substances comprised of these synthetic cannabinoids are an emerging trend that allows marijuana users a legal substitute to the drug, and law enforcement a hurdle in detection and deterrent enforcement.

Kronic is advertised in the United States as a legal synthetic cannabis substitute without THC (an illegal substance) as the active component.

Some sellers won't divulge what is actually in their blend. They avoid the question by claiming that they cannot divulge the formula. Others claim that the ingredients will be freely disclosed if you send them an email asking for it. Some sellers are also using the **HARM MINIMISATION** policies of the United Nations as justification for selling their product. The following quote has been directly copied from 'kroniccartel's website ¹⁰ :

“Legal Weed

The products offered from this web shop are inspired by the UN drug policy which puts **Harm Minimisation** forward as a safer more amicable solution to drug use. Accordingly we have sourced the best herbal highs and smoking incense blends from the world’s leading manufacturer to provide you with the best and safest experience possible while remaining on the right side of the law.”



SYNTHETIC CANNABINOIDS: How they mess you up

The products may impair a person's judgment, creating hazards when an affected person operates machinery or drives a vehicle.

SYNTHETIC CANNABINOIDS: How they mess you up- long term

Myth: The sellers promise ‘safer, legal highs’ – ‘similar if not identical experiences as with non-synthetic drug use’ – ‘cheaper option’.

Facts: A Reality Check - There is a growing list of ‘horror’ stories around each and every one of these substances. Here are just some of the issues...a) Often ‘disappoint’ in their effect b) Products are not safe at all and are now illegal c) the risks of using these substances are extremely high including violent psychosis (including cannibalistic rage) – fingers toes and even hands fall off – coma – tremors – acute poisoning – seizures – paranoia – self harm – and of course, death. ¹¹

SYNTHETIC DRUGS LEGAL!?: What is being done about it?

The advent of these ‘mimics’ has caused some serious problems not only for users but for legislators, as many of the individual ‘ingredients’ of the drugs and even the full ‘faux drug’ itself were not illegal, but could possibly give you the same so called ‘high’ as the non-synthetic illicit drug.

For example by changing only one molecule in a chemical sequence, a ‘new’ synthetic drug (i.e. synthetic cannabis) no longer fell under the category of a ‘scheduled illicit’ substance in previously existing drug laws. This of course caught everyone by surprise. However, this ‘legal loophole’ has been largely remedied on both a national and international scale.

Countries around the globe are introducing new laws and regulations in order to reduce the production and distribution of these harmful designer drugs

In September 7, 2011 – the US Drug Enforcement Agency (DEA) used its emergency scheduling authority to temporarily control three synthetic stimulants (mephedrone, MDPV, and methylone).

By May 31, 2012 – US Federal legislation to criminalize bath salts had been passed in the United States Senate. And in July 2012, President Obama signed the ban on bath salts into federal law. Makers of the drug have managed to circumvent previous bans by slightly altering the chemical formula. The latest ban combats the problem by prohibiting not only the current "bath salts" compound but any versions that might be made the future.

Sweden is currently trialling a process that has great success under what is called the 'Destruction Act'. The customs people simply identify every shipment that has quantities of known NPS components, seize it, advise the importer of their seizure and give them two weeks to challenge the seizure – no charges laid – product destroyed. Their success rate using this has been remarkable and as of May 2012 not one seizure has been challenged. To add to that the Government has shut down all websites selling these products. This too has reduced use of these synthetically manufactured Novel Psychoactive Substances (NPS)

SYNTHETIC DRUGS LEGAL!?: What is being done about it in Australia?

Australian state governments are progressively declaring new psychoactive substances as illegal, but the problem remains as to how to keep up with the manufacture of new psychoactive products with harmful side effects coming onto the open market which do not qualify as being illegal.

Kronic now illegal in Western Australia and New South Wales

The West Australian Government in June 2011 listed a number of synthetic cannabis products, including Kronic, Voodoo and Mango Kush, as illegal substances.

But synthetic drug makers had since released a new product, Kronic Black Label, using a different of chemicals they say make it still legal to sell. In a news report (AAP 05 August 2011) it was reported that Perth police suspected the smoking of Kronic Black Label was responsible for the death of a 38 year old man. Samples of the new product were seized by WA Police for testing and the Government declared it will move to add any new synthetic cannabis products to its list of banned substances.

Until 01 July 2011, synthetic cannabis products were sold legally both online and by adult shops, tobacconists and herbal retailers across the New South Wales under the brand names Kronic, K2, Spice, Kaos, Voodoo, Mango and Northern Lights.

NSW state government will ban the products under existing legislation of the NSW Drug Misuse and Trafficking Act, in which case they would be prohibited under the same category as cannabis, heroin and cocaine.

The NSW Health Minister, Mr Humphries, is quoted as saying: "It is important to understand that these are not soft or recreational herbal products, they represent a real danger to an affected person's safety and wellbeing."¹²

In Victoria, in September 2012, new laws were to be introduced to state Parliament which have the potential to outlaw 4-MMC (Meow Meow), BZP (an amphetamine style drug), MDPV (mimics amphetamine) and GBL(liquid ecstasy).¹³

References:

1. <http://news.blogs.cnn.com/2012/05/29/reports-miami-zombie-attacker-may-have-been-using-bath-salts/> (cited 4/6/12)
2. <http://www.consumerreports.org/cro/magazine-archive/2010/september/health/dangerous-supplements/supplements-to-avoid/index.htm>
3. <http://www.consumerreports.org/cro/magazine-archive/2010/september/health/dangerous-supplements/supplements-to-avoid/index.htm>
4. <http://en.wikipedia.org/wiki/Theobromine>
5. http://en.wikipedia.org/wiki/Pelargonium_graveolens#Toxicology
6. http://www.wada-ama.org/Documents/World_Anti-Doping_Program/WADP-Prohibited-list/WADA_Prohibited_List_2010_EN.pdf
7. CBNNews.com 'DEA Cracks Down on Synthetic Designer Drugs' Sunday, July 29, 2012
8. CBNNews.com, Thursday, July 12, 2012
9. NIDA Info Facts: Spice - National Institute on Drug Abuse, US Department of Health and Human Services. Jan 2011.
10. http://kroniccartel.com/?utm_source=Google&utm_medium=PPC&utm_term=Kronic&utm_campaign=Kronic%2BPPC
11. **New Synthetic Drugs Challenge Prevention and Law making – can we keep up? Author Sara Wall** – Drug Expert, Swedish National Institute of Public Health (3rd World Congress Against Drugs – Stockholm, Sweden May 2012)
12. NSW to ban synthetic cannabis Kronic , *Craig Dunning, The Daily Telegraph* , June 28, 2011 (<http://www.dailytelegraph.com.au/nsw-to-ban-synthetic-cannabis-kronic/story-fn6b3v4f-1226083307068>) Cited 5 Sept 2012.
13. Herald Sun, page 15, 29 August 2012

A major source for details on NPS's:

Donald W. Reid 2012, *The New High: Designer Drugs and New Trends*.