

Drug overview: Cannabis concentrates can be made using a range of processes that extract THC from herbal cannabis, and have been in use for thousands of years in the form of paste, oil and hashish. More recently, a combination of the change in cannabis laws in some parts of the world with advances in technology and chemistry have led to new methods of cannabis extraction. These can broadly be grouped into two methods: *solvent extraction* (dissolving cannabis in a liquid to extract the THC) or *non-solvent extraction* (such as dry-sieving). Butane Hash Oil (BHO) is a solvent-based method, made by using butane to dissolve the THC from cannabis plant material.^{1,2}



Fig. 1: Cannabis concentrate



Fig. 2: An oil rig

How it is made: BHO can be made in many ways that range from home extraction using ready-available solvents to complex extractions using more sophisticated equipment. At its most straightforward, butane can simply be used to dissolve cannabis plants (this process is known as *blasting*), and the resulting liquid can be left to evaporate, or heated to remove the solvent. More complex production lines involve expensive equipment and processes such as *vacuum purging*, in which BHO is heated under pressure. Using incorrect temperatures during the production of BHO can be dangerous (see harm reduction advice on pages 3 and 4).

How it is smoked: Traditional smoking methods such as joints, pipes or hot-knifing are not effective ways of consuming BHO as it becomes a runny liquid when heated. Bongs for smoking BHO are often nicknamed *oil rigs* as they are rigged with glass or titanium *nails* in the body of the bong that can be heated. A small amount of the BHO is then smoked by *dabbing* it onto the heated nail before breathing in the smoke (see page 3).

Street/brand names: Street names for cannabis concentrates (depending on the form, consistency and colour of the finished product) include: dab, shatter, amber, oil, wax, honeycomb, butter, sap.

Cost: Approximately £50 per gram (prices can range from around £30-£70).

Chemical name: The main active ingredient in cannabis concentrates is THC (Tetrahydrocannabinol), however there are more than 420 chemicals in cannabis, more than 60 of which are cannabinoids.³

Legal status: Cannabis was re-classified as a Class B substance under the Misuse of Drugs Act 1971 in January 2009.

Effects: 2,4,5,6,7,8,9,10,11

Physical

Pain relief, relaxation, sleep promotion, reduced nausea, rapid changes to heart rate and blood pressure, dry mouth and throat, increased nausea, vomiting, loss of consciousness, increased tolerance and withdrawal, impaired driving skills, increased/decreased appetite, sleep problems, restlessness, seizure-like activity.

Psychological

Euphoria, relaxed, giggly, altered time perception, enhanced sensations, anxiety, paranoia, psychosis, panic attacks, hallucinations, problems with attention, memory and concentration, aggression, help with drug dependence, cravings, precipitated/aggravated mental health problems.



Fig. 3: "Blasting" - forcing butane through cannabis plants



Fig. 4: The resulting liquid (known as *slurry*) after the blasting



Fig. 5: "Purging" - butane is evaporated from the extract

Harm reduction advice: ^{1,2,8,10,12,13,14,15,16,17}

If you choose to use BHO, taking some simple steps can reduce some of the risks and help you stay safer:

- **Start low, go slow.** BHO can contain up to 80 or 90% THC content compared with 10-25% for cannabis flower.^{6,18,19} The effects of a dab come on quicker and stronger than smoking flower and is therefore not recommended for novice users. Novice dabbers should only try a very small amount initially: a dab about half the size of a grain of rice (or smaller) has been recommended.²
- **Things that go boom.** Butane is highly flammable and volatile, can be ignited even by static electricity and BHO production has been linked to an increase in hospital admissions for burns.²⁰ Preparing BHO without laboratory facilities is extremely dangerous, and professional extractors use 'closed loop' systems and outdoor production methods to reduce the risk of explosions.
- **Dirty butane.** Standard butane sold as lighter refills can contain about 80% butane along with a range of other chemicals. Sourcing refined or purer butane will reduce the amount of impurities inhaled.
- **Contaminants.** One study in the US analysed 57 samples of cannabis concentrates and found that over 80% were contaminated by solvents or pesticides. The most common pesticide found in samples was one that was not registered for use in food crops.⁶
- **Torch safety.** If you're using an oil rig, heating a nail to the appropriate temperature requires the use of a torch (often butane), and proper torch safety is key to not hurting yourself and others. When handling a torch, make sure to heat only the nail, not the rig itself as this can lead to broken glass. The nail will stay hot for a period after it has been heated; using a thick heat-resistant 'dab mat' can reduce the risk of fire.



Fig. 6: Pre-heating the nail with a butane torch



Fig. 7: Dabbing



Fig. 8: Inhalation

- **Clean your nails.** 'Season' a new nail to remove chemicals and polishes used in the manufacturing process by repeatedly heating the new nail and evenly spreading some low-grade concentrate over it. Clean your nail regularly to reduce the build-up of impurities than can further damage lungs.

Recovery Position: The recovery position is for someone who is unconscious but breathing normally. If they are not breathing normally CPR is required, with an emphasis on giving supplementary oxygen via rescue breaths.



Start by placing their arm as if they are waving.



Place the other arm across their chest and hold their hand against their cheek.



Lift up the knee that is furthest from you. Continue to hold their hand in place.



Turn them on their side by pulling the knee towards you and down.

For further information on Overdose & Emergencies see [UK and Ireland DrugWatch Information Sheet](#).

Where to get help: We would advise anyone experiencing issues from BHO or other substances to seek medical support via their GP or the NHS. There are a wide range of local drug services throughout the UK, to find out what is available in your area please use the links below:

England: [Find Support | Frank](#) Scotland: [Scottish Drug Services](#)
Wales: [Dan 24/7](#) Northern Ireland: [Public Health Agency](#) ROI: [Drugs.IE](#)

For further advice, medical professionals can use the National Poisons Information Service 24-hour telephone service on 0344 892 0111 or its online database, TOXBASE. Any health professional encountering an unusual or unexpected adverse reaction to the use of BHO (or any other drug) should report the reaction to [RIDR](#).

Written by [Mark Adley](#) in association with [UK and Ireland DrugWatch](#): an informal online professional information network established by a group of professionals working in the UK and Irish drugs sector. The aim of the group is to raise/establish standards for drug information, alerts and warnings. It is currently an unfunded, bottom-up initiative that works in the spirit of mutual co-operation. Details of current members can be found [here](#). A digital version of this document with interactive links is available from: www.thedrugswheel.com/BHO.php.

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Images

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