

ENTHEOGENESIS AUSTRALIS

Cannabis concentrates

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Cannabis sativa, *Cannabis indica* and *Cannabis* hybrids have been consumed for psychoactive effect for thousands of years. The oldest written evidence of this consumption was recorded by Herodotus in ≈440 BCE and discussed ancient Scythian bath houses, which doubled as giant, walk-in *Cannabis* vaporisers (Butrica, 2002).

Cannabis concentrates are made from the resin of *Cannabis* plants and are purer and more potent sources of cannabinoids than unrefined *Cannabis* products.

It is unclear at what point in the history of *Cannabis* use that the use of *Cannabis* concentrates became commonplace. Evidence of the term 'hashish' can be traced to an Egyptian document from 1123 CE (Booth, 2011).



Fig. 1



Fig. 2



Fig. 3

Hashish. *Hashish* typically refers to *Cannabis* concentrates produced without the use of a solvent, similar to the concentrates we describe as 'chocolate hash' and 'kief'. Fig. 1 is likely chocolate hash, while Fig. 2. and 3 are likely kief. Photos by Tom Freeman, University of Bath.

It has also been suggested that *Cannabis* concentrates were commonly used in the production of *bhang*, a beverage with a history throughout the Indian subcontinent extending beyond 1000 BCE (Mikuriya, 1973).

The primary psychoactive component of *Cannabis* is delta-9-tetrahydrocannabinol (THC), although additional compounds including other cannabinoids, terpenes and flavonoids appear to have influence on psychoactive effects. Cannabidiol (CBD), for example, is commonly found in *Cannabis* plants and is an antagonist of cannabinoid receptors. When consumed alongside THC, CBD appears to reduce the likelihood of THC induced psychosis (Silva, et al. 2015).

Different methods of producing *Cannabis* concentrates, including the use of different solvents and different *Cannabis* strains, influence the cannabinoid, terpene and flavonoid profile of concentrates. This means the composition, effects and taste of *Cannabis* concentrates can vary widely. As new hybrid *Cannabis* plants and extraction and production techniques are developed, it is likely the variety of *Cannabis* concentrates will continue to diversify.

Types of Cannabis concentrates

Many solvents and production techniques can be applied to extract *Cannabis* resin and create *Cannabis* concentrates. Common types of black-market *Cannabis* concentrates include;

- Chocolate hash. Resin that sticks to people's hands or equipment.
- Kief. Sifted resin, trichomes and other plant dust.
- Bubble hash. Ice or water separated resin.
- Rosin. Heat and pressure separated resin.
- Butane Hash Oil (BHO). Butane extracted resin.
- Rick Simpson's Oil (RSO). Ethanol extracted resin.



Solvent extracted Cannabis resin. An increasingly popular type of *Cannabis* concentrate. Photos by Tom Freeman, University of Bath.

Harm reduction

It is easy to overdose on Cannabis concentrates – especially when eating them! If you are intending to consume a concentrate, start with a small quantity and work your way up, waiting a sufficient amount of time (\approx 2 hours if eating, \approx 30 minutes if smoking or vaporizing) between doses. Concentrate dosage is typically in milligrams. 5mg of THC has been suggested as a standard dosage unit for oral, vaporised and smoked Cannabis (Freeman & Lorenzetti, 2019).

Eating a Cannabis concentrate is less harmful than inhaling a concentrate. While it is easier to overdose with oral concentrate consumption than inhaled consumption, due to route of administration and duration of onset, oral concentrate consumption is likely to produce less physical harm than smoked or vaporised consumption. Smoking and vaporising harms your respiratory system.

The less harmful concentrate contains less plant material, solvents and other impurities. The risk of unevaporated solvent impurities is greatest with BHO and other concentrates made with solvents containing hydrocarbons. Bubble hash and rosin are likely the less harmful black-market concentrates because these concentrates only add water and heat.



BHO. It can be difficult to tell if black-market BHO contains solvent impurities. Photo by Tom Freeman, University of Bath.

Light coloured concentrates may indicate purity and are likely less harmful than dark-coloured concentrates.

Resin can be extracted or combined with solvents that don't evaporate, like vegetable oil. Concentrates are sometimes dissolved and diluted in fatty foods, like butter.

Don't smoke or vape fat diluted 'cannabis oils', this can cause respiratory problems. These diluted oils are meant to be eaten or applied to skin. Vaping concentrates containing diluents like vitamin E have caused lipid pneumonia (Vethanayagam, et al. 2000).

Legal issues

Possession of any THC containing product is illegal in all Australian states and territories without a license or prescription. CBD products have recently been approved for over-the-counter access at a federal level. Terpene and flavonoid products that do not contain THC are legal in Australia.

The legal context of Cannabis products may be different in your country, and often differs between states. Before buying, selling, producing, or consuming Cannabis concentrates, ensure to review the specific local laws relevant to you.

Emergency assistance

If you experience an emergency in Australia, always phone 000. Information about poisoning can be accessed by phoning the national poisons hotline on 131 126.

References

- Booth, M. (2011). *Cannabis: A History*. Transworld.
- Butrica, J. (2002). The Medical Use of Cannabis Among the Greeks and Romans. *Journal of Cannabis Therapeutics*, 2(2), 51-70. https://doi.org/10.1300/J175v02n02_04
- Erowid, E. & Erowid, F. (2011). *The L.E.S.S. Method: A Measured Approach to Oral Cannabis*. Erowid. https://erowid.org/plants/cannabis/cannabis_article1.shtml
- Erowid (2016). *Cannabis & Marinol Dosage*. Erowid. https://www.erowid.org/plants/cannabis/cannabis_dose.shtml
- Freeman, T. & Lorenzetti, V. (2019). 'Standard THC units': a proposal to standardize dose across all cannabis products and methods of administration. *Addiction*, 115(7), 1207-1216. <https://doi.org/10.1111/add.14842>
- Mikuriya, T. (1973). *Marijuana: Medical Papers 1839-1972*. Pelican Pond.
- Silva, T., Balbino, C. & Weiber, A. (2015). The relationship between cannabidiol and psychosis: A review. *Annals of Clinical Psychiatry*, 27(2), 134-141.
- Vethanayagam, A., Pugsley, S., Dunn, E., Russell, D., Kay, J., & Allen, C. (2000). Exogenous lipid pneumonia related to smoking weed oil following cadaveric renal transplantation. *Canadian Respiratory Journal*, 7(4), 338-342. <https://doi.org/10.1155/2000/248915>

Disclaimer

This document cannot cover all information regarding this diverse area of study. This document is only a starting point and should be used in conjunction with other evidence concerning ethnobotanical plants, fungi and related compounds.

Ethnobotanicals and ethnomycologicals have risks and benefits and should always be treated with caution and respect. Some practices and ideas associated with the use of ethnobotanicals are embedded in cultural and religious traditions.

Research, due diligence, and caution are essential. Ensure to understand local laws, traditions, and sustainability before working with any ethnobotanicals.

Who we are

Entheogenesis Australis (EGA) is a charitable, educational organisation established in 2004. We provide opportunities for critical thinking and knowledge sharing on ethnobotanical plants, fungi, nature and sustainability.

We also encourage gardening and the conservation of plants, fungi and seeds that have a traditional relationship with humankind. We aim to celebrate culture, science, art, politics, and community around medicine plants through our conferences, workshops and resources.

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