Cannabis Chemistry

Terpenes: These are a diverse class of organic compound produced widely by animals, plants, as well as trees such as pine and yew. Terpenes are the primary constituents of essential plant oils.

Cannabinoids: These are a class of chemicals that are produced naturally in the body of humans and animals (endocannabinoids), or in plants such as Echinacea and Cannabis (phytocannabinoids). There are estimated to be 400 unique cannabinoids.

Cannabinoid Profiles: Each strain of cannabis contains different ratios of cannabinoids which work together to provide their unique therapeutic effects. While it is not conclusively known exactly what each cannabinoid does, and how they interact, more and more research is being done in this area.

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Tetrahydrocannabinol (THC): The primary psychoactive component of the Cannabis plant, THC appears to ease moderate pain. It has also been shown to reduce neuroinflammation, and stimulate neurogenesis.

Cannabidiol (CBD): This cannabinoid was thought to be non-psychoactive, but recent evidence shows that strains higher in CBD may reduce schizophrenia-like symptoms, and appears to relieve convulsion, inflammation, anxiety and nausea, and may play a role in preventing short-term memory loss. More information on these subjects can be found in our pamphlet: Terpenes and Cannabinoids

The BCCCS encourages a holistic and autonomous approach to health by providing education and awareness about the services we offer.

Cannabis Resources

International Association for Cannabinoid Medicines
(www.cannabinoidmed.org)

International Cannabinoid Research Society
(www.cannabinoidsociety.org)

The Canadian Consortium for Cannabinoid Research
(www.cccic.net)

Center for Medicinal Cannabis Research
(www.cmcr.ucsd.edu/)

Montana Biotech
(http://montanabiotech.com)

US National Cancer Institute
(http://www.cancer.gov/cancertopics/pdq/cam/cannabinis)

US National Library of Medicine
(http://www.nlm.nih.gov)

Cannabis Varieties

Cannabis is generally divided into two main types, Sativa, and Indica.

Sativa: The effects of a Sativa are generally on the mind rather than the body. Sativa strains tend to be more stimulating and energizing as well as creativity enhancing which makes them more suitable for daytime. Some find Sativas make excellent expectorants, and can increase the heart rate. Pure strains are more difficult to come by.

Indica: The effects of an Indica are generally on the body which makes it an ideal choice for pain management. Indicas generally have a relaxing and sedating effect on both the mind and the body, which makes it very suitable for evenings. Pure strains are more difficult to come by.

Dominant Strains: Most strains are a mix of both Indica and Sativa, with one making up more of the plants lineage than the other (at least 60-40). In this way, growers are able to develop strains that have some effects of both, and create symptom specific strains, while retaining more of the effects from the dominant strain.

Cross: These are plants that contain an even mix of both Indica and Sativa characteristics. At the BCCCS we define a cross as any strain that is a mix of Sativa and Indica at a ratio of less than 60-40. In this way, growers are able to develop strains that have some effects from both types.

Within this pamphlet is a list of terms you may encounter around medicinal cannabis, and their definitions.

Cannabis: Basic Terminology

SINCE 1996
August 2013

Resources

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### Crosses

**How can we get more 100% Sativa or Indica?** Pure strains are difficult to come by since the increased popularity of cross strains over the past few decades. Cultivators cross-strain because of certain properties that some cannabis plants have (i.e. high yield and short growing season as well as effects like strong pain relief or highly stimulating effects).

**Why are there more indoor-grown strains than outdoor-grown?**

Cultivators generally prefer to grow indoors because of the option of growing year long as well as the benefits of a more controlled environment. Being able to control the light cycle in particular is a benefit of indoor cultivation, and as we learn more about terpenes, this may become more important. It also makes less room for pests and mold to develop and if they do occur they can generally be dealt with before affecting the plants health. In addition, the current legal status of medical cannabis is tested for contaminants to ensure a safe product for consumption. We test for five things; bacteria colonies, coli form (bacteria waste), E. coli, yeast, and mould.

We do not irradiate cannabis to sterilize it as Health Canada allows suppliers to do, and instead focus on ensuring that our cannabis is grown with love, in a clean, healthy environment.

We do not test for cannabinoids or terpenes, as we are still in a legal grey area, and testing at reputable licensed labs is currently not available to us. In addition, modern scientific understanding of how the various components of this whole plant medicine work together is in its infancy, and there are bugs to be worked out in the testing processes currently available. For example, different samples from the same plant can produce differing results, and may be misleading. We believe our approach to herbal medicines draw on ancient techniques and knowledge that modern science is only now beginning to be able to explain in its own way.

### Organics and Testing

**What does Organic mean to the BCCCS, and how is it determined?** Currently our ‘organic’ standard is applied to any strain of cannabis grown without the use of commercial fertilizers, pesticides and fungicides. Most of our organic cultivators make their own soil mixes and compost using only OMRI (Organic Materials Review Institute) certified plant foods and fertilizers. The OMRI provides cultivators with an independent review of products that can be used for the production of Certified Organic products.

**What does the BCCCS test for?**

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### What is Hash?

**Hash (or Hashish):** This is a cannabis product composed of compressed or purified preparations of stalked resin glands. Called trichomes, these are tiny resin structures that can be found all over flowering female cannabis plants.

There are mainly three different varieties of hash; screened hash, water-extracted hash, and finger hash. Their names correspond to the method of extraction of cannabis trichomes of the plant.

**Screened Hash:** This type of Hash is extracted by pressing the trichomes through a silk screen, collecting the sifted material, heating it, and then pressing it into a brick form. It breaks down easily with a bit of heat.

**Water extracted Hash or “Bubble Hash”:** is made by using the leaf clippings or actual buds of the cannabis plant; putting it in a "bubble bag", and adding it to an ice cold water bath.

The ice water makes the trichomes brittle, and with agitation the trichomes will break off and sink to the bottom of the bag. The filtration process is then repeated, resulting in a refined product.

It is called bubble hash because it melts and bubbles instead of burning under heat.

**Finger Hash:** is made by handling fresh or dried plants to collect the trichomes on hands or gloves. It is then peeled off and compressed. None of the Hash varieties we carry at the BCCCS are made with this method.

### Edibles

**How do you ensure the quality of baked goods and other edibles?** Makers of edible products are required to provide a sample of their cannabis to be tested at the lab. We also require all of our edible producers have valid Food Safe certificates, and that they maintain a meticulously clean environment which also conforms to Food Safe standards.

**Tinctures and butters; how are they made and what makes them good?** Butters are made by melting butter over low heat. Shake or Cannabis trimmings is then added to the butter and then left to simmer at a low temperature for a minimum of two hours. The butter is then strained and frozen. There are butters available in different strains; we carry both a sativa and an indica butter. A good butter will be very potent with no plant matter in it. It will be a very dark green in colour and will have a strong Cannabis smell.

**Tinctures and Infusions:** there are two types of tinctures available at the BCCCS, the only difference between them is how they are distilled. Alcohol tincture is distilled in alcohol of a high proof (40% and up). Glycerin is distilled in (a vegetable base for those who cannot consume alcohol). The potency varies from person to person depending on your dosage and tolerance. Tinctures, infusions, butters, and edibles are an effective way of treating pain without the associated risks of smoking.