



Midwest Homebrewing & Winemaking Supplies
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What is the difference between hop pellets, hop plugs, whole leaf, and extract?



Pellet Hops



Plug Hops



Whole Leaf Hops

Pellets

Hop pellets are highly processed hops consisting of finely powdered hop cones compressed into pea-sized tablets. Used in both home and commercial brewing. Regular hop pellets are, by weight, 20 to 30% stronger than the same variety in loose form; one pound of hop cones yields about 10 to 12 ounces of pellets. Concentrated pellets, as used in the brewing industry, are first processed to remove the non-resinous material, thus reducing the weight and volume. Standardized pellets are made from blends of hops to obtain a specific and consistent alpha acid level.

Plugs

Hop plugs are whole flowers that have been dried and compressed into a plug. They are reported to impart a better aroma and flavor than the pellet hops but you will have to decide for yourself. Hop plugs have less surface area exposure to wort and thus are less efficient for bittering, i.e. more of it is required to impart an equal amount of bitterness compared to pellets.

Whole leaf

Whole hops are the whole flower dried and uncompressed. Whole hops also have less surface area exposure to wort than pellets and are less efficient for bittering, so more of them are required to impart an equal amount of bitterness compared to pellets.

Hop Extracts

Hop extracts are the liquid bittering essences of hops and are used for convenience in the brewing industry. Some liquid hops extracts are processed with a wide variety of chemical solvents that dissolve the hop resins into solution and chemically "isomerize" alpha acids (to isomerize, means to chemically rearrange the molecular structure of alpha acids so that they are soluble in water and thus impart their bitter qualities.) There are also hop extracts available that are not isomerized.

The non-isomerized hop extracts also do not come into conflict with any German beer purity laws if this is a particular concern of yours. The chief advantage of using the hop extracts, especially for large breweries or where storage space is limited, is that they occupy considerably less space. All hop extracts must be used sparingly and care must be taken that they are well mixed to ensure that they are dissolved.

Note: Hop products keep better when stored in a sealed container (preferably airtight), out of sunlight and at 54°F. Whole hops, hop plugs, and pellets can be put in a mesh bag to avoid the ensuing mess. If you decide to use a [straining bag](#), you may wish to add 10% more hops to adjust for diminished hop bitterness utilization.