Beer Style Guide

This guide is to help you select the Barons or Wort Works beer kit that best suits your taste. To make choosing easier, we list each type of kit available and examples of similar types of commercial beer, but there is no guarantee you will make a beer identical to the commercial brand. The comparisons are based on information provided by the American Association of Brewers.

BARONS™ BEER KITS

Barons American Lite
American Association of Brewers style:
American Lite Lager
Commercial equivalent: Coors Light, Miller Lite

Barons British Export Strong Bitter
American Association of Brewers style:
Extra Special Bitter
Commercial equivalent: Bass Pale Ale

Barons British Nut Brown Ale
American Association of Brewers style:
English Brown Ale
Commercial equivalent: Newcastle Brown Ale

Barons Canadian Draught
American Association of Brewers style:
American Standard Lager
Commercial equivalent: Labatt Genuine Draught

Barons Canadian Golden Ale
American Association of Brewers style:
American Pale Ale
Commercial equivalent: Sleeman's Cream Ale

Barons Canadian High Test
American Association of Brewers style:
American Malt Liquor
Commercial equivalent: Labatt Maximum Ice

Barons Canadian Lager
American Association of Brewers style:
American Standard Lager
Commercial equivalent: Labatt Blue, Moosehead

Barons Canadian Pilsner
American Association of Brewers style:
American Premium Lager
Commercial equivalent: John Labatt Classic

Barons Continental Lager
American Association of Brewers style: Vienna Lager
Commercial equivalent: Späten Vienna Lager

Barons German Bock
American Association of Brewers style:
Traditional German Bock
Commercial equivalent: Holsten Festbock

Barons India Pale Ale
American Association of Brewers style: India Pale Ale
Commercial equivalent: Double Diamond

Barons Irish Stout
American Association of Brewers style:
Classic Dry Irish Stout
Commercial equivalent: Guinness Pub Draught

Barons Japanese Dry
American Association of Brewers style:
American Dry Lager
Commercial equivalent: Asahi Dry

Barons Mexican Dark
American Association of Brewers style:
American Dark Lager
Commercial equivalent: Dos Equis

Barons Mexican Cerveza
American Association of Brewers style:
Mexican Lager
Commercial equivalent: Corona

Barons Scottish Mild
American Association of Brewers style: British Mild Ale
Commercial equivalent: Younger's Tartan Special

WORT WORKS™ BEER KITS

Wort Works Black Bison Bock
American Association of Brewers style:
Traditional German Bock
Commercial equivalent: Holsten Festbock

Wort Works Black Forest Lager
American Association of Brewers style:
Munich Dunkel
Commercial equivalent: Späten Dunkel Export

Wort Works Bohemian Pilsner
American Association of Brewers style:
Bohemian Pilsner
Commercial equivalent: Pilsner Urquell

Wort Works Northern Prairie Wheat Beer
American Association of Brewers style:
American Wheat Beer
Commercial equivalent: Big Rock Grasshopper Wheat

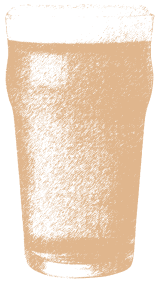
Wort Works Redwood Canadian Ale
American Association of Brewers style:
American Pale Ale
Commercial equivalent: Big Rock Traditional Ale

Wort Works Richter Scale Amber Ale
American Association of Brewers style:
American Amber Ale
Commercial equivalent: Pete's Wicked Red Ale

Wort Works Royal Pale Ale
American Association of Brewers style:
Classic English Pale Ale
Commercial equivalent: Samuel Smith Pale Ale

Wort Works Steamship Lager
American Association of Brewers style:
American Premium Lager
Commercial equivalent: Budweiser

For more information, contact your WINEXPERT retailer, who will be happy to help you.



THE HOME BREWING GUIDES™

Using a Hydrometer

The hydrometer is one of the home beer or wine makers most important — and frequently overlooked — tools. Many people find using a hydrometer too complicated. In reality, a hydrometer is a very simple device that measures the density of a liquid. In beer and wine making, the more unfermented sugar present, the higher the density.

During fermentation, the yeast converts sugar into alcohol. As the sugar is converted, the density of the beer or wine decreases. Measuring sugar density with the hydrometer before, during and after fermentation will tell you several very important things.

First, most beer and wine kit manufacturers provide both starting and finishing specific gravity (S.G.) levels for their products. (Specific gravity is the reading you get from a hydrometer.) If a kit states that the starting gravity should be in the 1.070 to 1.080 range, and you get a reading of 1.076, you know the ingredients are correctly mixed and the product purchased was in good condition. As we will see later, it's important to keep a record of the specific gravity readings at each stage of fermentation.

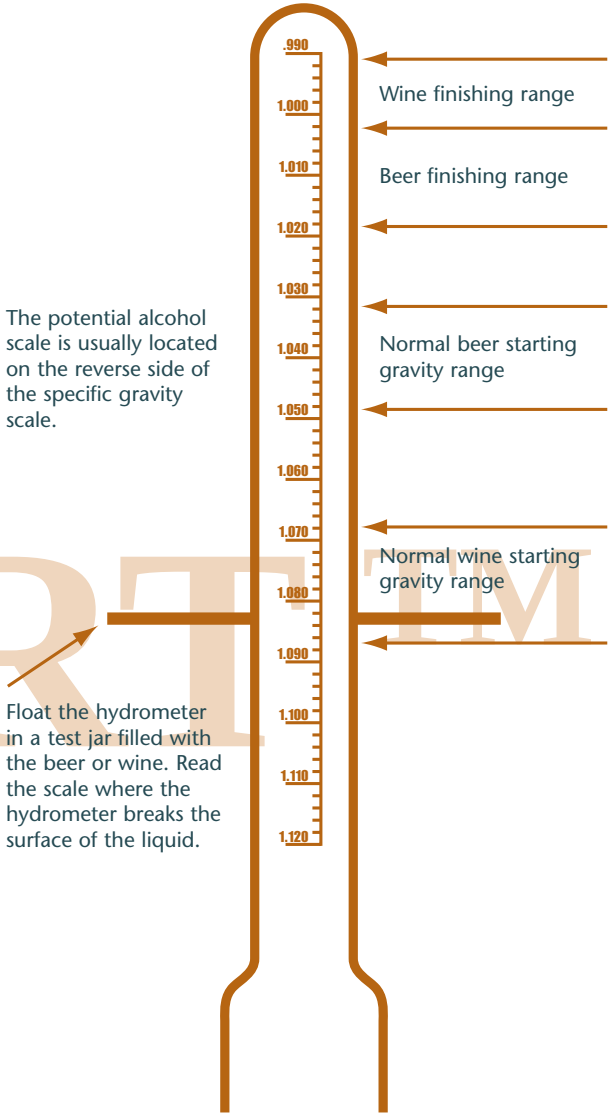
Second, by measuring specific gravity during fermentation you can see whether fermentation is proceeding normally. Kit manufacturers indicate how long it should take the beer or wine to reach certain S.G. levels. Not reaching those levels within the guidelines could be an indication of problems, like temperature fluctuations, sluggish yeast activity, unsuitable conditions. Most problems are easily treatable, if detected in time by using a hydrometer. Call your retailer for advice.

Third, measuring the specific gravity at the end of fermentation is the only reliable way to determine that the fermentation has, in fact, finished. You must get readings within the manufacturer's range of final S.G. for three days in a row, with no visible signs of fermentation. Possible consequences of unfinished fermentation can extend from difficulty clearing the product and high residual sweetness from the unfermented sugar, to exploding bottles due to continuing fermentation in the sealed bottle. The hydrometer is an absolute necessity.

The hydrometer also lets you calculate the potential alcohol content of your beer or wine. Many hydrometers have a potential alcohol scale built in. Here's how to use it.

On Day 1, when you mix all ingredients, take a hydrometer reading and note the reading on the potential alcohol scale. For example, an English Bitter may have an S.G. of 1.045. On the P.A. scale, this reads as 5.8. The same beer may have a finishing gravity of 1.010. On the P.A. scale, that's 0.9. To estimate the potential alcohol content of the beer, simply subtract the final reading from the initial reading: 5.8 - 0.9 = 4.9% alcohol per volume. This is the potential alcohol, reached only if all the sugar is converted into alcohol, which is not always the case. But the P.A. is reliable enough to use as a guide to the alcohol content of your bottled beer or wine.

For assistance, contact your WINEXPERT retailer, who will be happy to help you.



THE HOME BREWING GUIDES™

Two-stage Method for Brewing 23 Litres of Beer

- Gather all necessary equipment
- Read all instructions through before beginning
- Always clean equipment before use with a chlorine detergent such as *Chloroclean™* or chlorine-free detergent such as *Ecolox™*. Rinse well. Sanitize with sulphite solution and rinse again with clean water, or desinfect with *Aseptox™* and let drip dry.
- Keep a log of your brewing, noting type of beer, starting and finishing specific gravity and temperature readings

Step 1
Primary Fermentation

1. Remove yeast pack and place unopened can in hot water for 15 minutes to soften malt extract, making it easier to pour from can.

2. Boil 3 to 4 L (12 to 16 cups) of water.

3. When malt and water are ready, pour half the boiling water and contents of can into primary fermenter. Rinse can with hot tap water to get all remaining malt, and add to fermenter. Add the remaining boiling water and stir well to dissolve.

4. Add 1.5 L (6 cups) corn sugar. Alternately, use 1.5 kg (3 lb) of unhopped malt extract instead of sugar for a stronger malt-flavor beer. Other types of brewing sugar are available. Ask your retailer for more information.

5. Bring contents of fermenter to the 23 litre mark with cold water and stir well. Measure and note the specific gravity.

6. The starting temperature of the liquid should be between 21° and 24°C (70° and 75°F). If the temperature of beer wort is above or below this range, allow temperature to stabilize before proceeding to the next step.

7. Sprinkle yeast over surface of beer wort and stir in with a sterilized spoon or paddle. If your beer kit includes a package of enzymes or hop pellets, stir them in now. Cover primary fermenter with a loose-fitting lid. Fermentation should begin within 12 to 24 hours.

8. Take daily specific gravity and temperature readings and record them in your log.

Step 2
Secondary Fermentation

After 3 to 6 days, the specific gravity should be less then 1.020. If the fermentation temperature is cooler than the range specified, it will take longer to reach this point. Do not proceed to the next step until the specific gravity has reached 1.020.

9. Carefully siphon the beer into a clean and sanitized carboy, leaving all sediment behind. If necessary, fill carboy with sterile water to within 5 cm (2 inches) of neck.

10. Attach an airlock and rubber stopper to carboy.

11. Leave carboy at room temperature, 21° to 24°C (70° to 75° F), for 8 more days to finish fermenting. No tests are required during this time.

12. After 8 days, check and record specific gravity.

13. Leave another 2 days then check the specific gravity again. If the readings are the same and within the range specified in the instructions, proceed to the bottling stage. If the readings are not the same, leave for 2 more days and check the specific gravity again. Before bottling, the finishing gravity must be stable for 48 hours and there must be no bubbling activity in the airlock.

Bottling

To prepare beer bottles, soak them in a chlorine detergent like *Chloroclean* or in a non-chlorine cleanser like *Ecolox*. Rinse with tap water, sanitize with *Aseptox* and let the bottles drip dry, or sanitize with a sulphite solution and double rinse with sterile water.

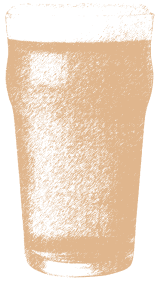
14. Carefully siphon beer into a clean and sanitized primary fermenter, leaving all sediment behind in the carboy.

15. Add 250 mL (1 cup) of corn sugar to beer and stir well to dissolve.

16. Immediately siphon beer into prepared beer bottles, filling to 2.5 cm (1 inch) from top. Cap bottles immediately with sterilized caps.

17. Store in a warm place for 14 days, then move to a cooler place. Always keep beer away from bright light. Your beer will improve with age, and will be at its best after 2 months in the bottle.

For assistance, contact your WINEXPERT retailer, who will be happy to help you.



The Home Brewing Guides™

Sugars for Brewing

Now we'll look at the four most common forms of sugar used in home brewing — table sugar, corn sugar, high-maltose glucose and dried malt extract — discussing the pros and cons of each type.

1. Table Sugar

Many older beer recipes and instruction sheets for home brew kits call for the use of table sugar. These instructions and recipes usually originate in the United Kingdom, where corn sugar is not commercially available. Table sugar is mainly glucose. Because yeast acts differently on different types of sugar, and some sugars are more readily fermentable than others, the yeast must first break down and "invert" the glucose molecules before fermentation can begin. This means two things. First, the fermentation process is more complicated than if you used a simpler form of sugar, like dextrose. Second, because some sugars are less fermentable than others, residual unfermented sugar could be left in your beer, giving it that cidery taste once common to home made beer. For these reasons, table sugar is not recommended for home brewing.

2. Corn Sugar

Corn sugar, or dextrose, is the most common form of sugar used in beer making. Because it is a simple form of sugar (a monosaccharide), yeast transforms it quickly into alcohol. Corn sugar is almost completely fermentable, leaving virtually no residual sweetness in the beer. Corn sugar does impart some flavor to the beer. While the taste is very light, beer judges and experienced brewers can always recognize a beer brewed with corn sugar. This is not necessarily a bad thing, as corn sugar is an effective and inexpensive brewing adjunct. It is much more suitable to lagers and light beers as it does not add any color or body to the beer. It's less suited to darker, fuller bodied beers, such as amber ales, bitters, stouts, etc.

3. High-Maltose Glucose

High-maltose glucose is becoming more popular as home-brewers experiment with adjuncts other than corn sugar. High-maltose glucose is a blend of dextrose, maltose, glucose and higher saccharides. The goal is to increase fermentability through the malt, while adding a degree of body and residual sweetness through the glucose, which is much less fermentable. High-maltose glucose is also ideal for beer that requires a medium to full body, but need to keep the color light, like cream ale. It should not be used for beer that requires a dry finish, such as dry lager, pilsner, pale ale, etc. If you use this sugar with a canned beer kit, expect the finishing gravity to be higher than the instructions call for.

4. Dried Malt Extract

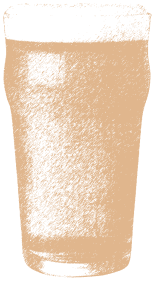
Dried malt extract, or DME, is the extract of malted barley in powdered form. Brewing kits contain liquid malt extract to which hops have been added. DME is the same thing, only without the hops and in a dried form. DME is usually available in three types — light, amber and dark — used for specific types of beer. Light DME is commonly used in lagers, pilsners, etc. Amber is for pale ales, bitters, etc. And dark is used in porters, stouts, bocks, etc. Brewers often mix different amounts of each type to achieve their ideal color. Many recipes call for DME to be used with other forms of sugar, such as corn sugar, to get a specific result. Many brewers, however, use only DME to make full-bodied, full-flavored, all-malt beers. DME definitely adds color to your beer, in addition to a full, malty flavor.

Other Sugars

Many specific recipes call for other sugars, such as brown sugar for brown ales, demerara sugar, lactose, etc. These sugars are used because they add pronounced flavor, or, as is the case with lactose, because they are unfermentable and add high sweetness. These sugars should not be used for regular beers as the results, although they can be interesting, will not be consistent with the type of kit.

Experimenting with different ingredients is part of the fun of home brewing. Understanding the implications of each ingredient will help you tailor your beer to your own tastes. If in doubt about the effect of any given ingredient, ask your retailer for advice.

For assistance, contact your WINEXPERT retailer, who will be happy to help you.



THE HOME BREWING GUIDES™

The "Steep & Boil" Brewing Method

After brewing beer from kits for a while, many home brewers prefer to experiment gaining more control over the taste of their beer. As the "full mash" method for brewing beer involves extra equipment and more time, many brewers are making the steep and boil method their first step to "real" brewing. This method requires only about two hours of preparation time and one or two pieces of extra, inexpensive equipment. The basic idea of the steep and boil method is to make your beer more flavorful. There are three steps for mixing ingredients: steeping the grains, adding the malts and sugars, and boiling in the hops. The beer wort is then fermented as usual.

Extra Equipment Required

In addition to your normal brewing equipment, you will need:

- A stainless steel or enamel brewing pot with lid, that will hold at least 12 litres
- A 120°C (250°F) thermometer
- A nylon brewing bag.

You should also have access to a stovetop-type burner.

Step 1
Steeping

The purpose is to add complexity to your beer. Steeping adds the flavors of certain forms of barley (depending on the recipe) to the water you use for brewing. For example, if you are making a lager, you could steep crushed lager malt in your brewing water to add grain complexity to the overall flavor. We recommend following a specific recipe until you get used to this process and can gauge results. Purchase all ingredients in the recipe from a specialized brewing supplies retailer. Almost all grains to be steeped must first be crushed. Your retailer can do it for you, or will have a mill available for you to do it yourself.

1. In your brewing pot, heat 6 litres (24 cups) of water to 75°C (160°F). Use a clothes pin to keep your thermometer off the bottom of the pot so it won't give false high readings.

2. Place grains in nylon brewing bag and pin it to the side of your pot so the grain is submerged but not touching the bottom of the pot.

3. Steep at 75°C (160°F) for 20 minutes, stirring frequently and agitating the grain bag with your spoon to ensure good water circulation.

4. After 20 minutes, remove the bag and discard the grain (save the bag for next batch). The spent grain is perfect for composting.

Step 2
Add the Malts

Most recipes call for a combination of liquid malt extract, dried malt extract and often some brewing sugars, such as corn sugar or glucose. At this point, add them to the brew pot, one at a time, stirring well to ensure they dissolve completely (at these temperatures, undissolved malt will burn on the bottom of the pot, affecting the flavor of the beer). Raise the heat on the burner to bring the wort to a rolling boil. Avoid boiling over!

Step 3
Add the Hops

This is the crucial step that defines the final flavor of the beer. There are two hop stages, boiling hops and finishing hops. Most recipes call for about 55 g (2 ounces) of boiling hops, and 15 to 30 g (½ to 1 ounce) of finishing hops. You can use either fresh whole hops or hop pellets. The quantities are the same, but boiling times are given for whole hops. **If using hop pellets, cut all times below in half**.

1. When the wort reaches a rolling boil, add boiling hops. Maintain a rolling boil for 60 minutes (30 minutes for hop pellets), stirring regularly.

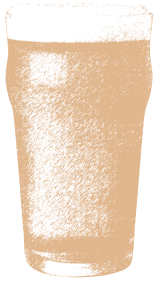
2. At 15 minutes before the end of boiling, add 1 teaspoon of Irish moss to prevent protein haze in your chilled beer.

3. At 10 minutes before the end of boiling, add finishing hops. This is a general guide, as hopping schedules vary.

4. When boiling time has finished, remove wort from heat and cool as quickly as possible, by placing the pan in a tub or a sinkful of cold water. Pour the cool wort into your primary fermenter and top it up with cold water.

You are now ready to brew your beer as usual. Pitch your yeast as soon as the wort reaches the right temperature range.

For assistance, contact your WINEXPERT retailer, who will be happy to help you.



The Home Brewing Guides™

Bottling and Conditioning your Beer

This is the stage of beer-making that causes home brewers the most trouble. Either the beer is flat, with no carbonation at all, or it foams up like champagne when the bottle is opened. Or brewers don't like the look of sediment clouding the beer they worked so hard to make. For peace of mind, you must understand the process of conditioning and bottling and the possible effects.

We like our beer carbonated for a more lively drink that produces a unique effect in our mouth. Carbonation is simply carbon dioxide dissolved in the beer under pressure. When you release that pressure by opening the bottle, the CO_2 escapes, forming the bubbles in the beer and the head on top. While most commercial breweries inject CO_2 into their beer, most home brewers couldn't afford the equipment and must produce CO_2 in their beer by a natural process.

That's where things can get complicated — but most problems are easily avoidable. When you ferment beer, you combine sugars and yeast to produce alcohol and carbon dioxide. The alcohol stays in the beer (luckily!) and the CO_2 escapes through the airlock. To carbonate your beer, you must generate another fermentation by adding sugar to beer that still contains yeast, then bottling and sealing it to let the CO_2 build and force it to dissolve into the beer. Where many brewers go wrong is when they add sugar. Many brewers mistakenly assume that if 5 mL (1 teaspoon) of corn sugar is good for a small bottle, you need to double for a big bottle. It just doesn't work like that.

What's crucial is to trap CO_2 in the bottleneck. As there is roughly the same head space in any size bottle filled to 2.5 cm (1 inch) from the top, you add the same amount of sugar whatever the size of the bottle — 5 mL (1 teaspoon). This rule applies to glass bottles. Because plastic bottles expand under pressure, the amount is different — about 50% more sugar to carbonate your beer to the same level. For mini-kegs and plastic draught kegs, the ratio of airspace to beer is much lower than for an ordinary glass bottle, so little sugar is needed. For a 5-litre mini-keg, 15 mL (1 tablespoon) is about right. For plastic draught tanks with pressure release valves, no more than 50 mL (¼ cup) of sugar is needed. There are two ways to add the priming sugar to your beer.

1. Bulk priming, which means one dose of sugar poured into the primary fermenter. Quick and clean, this method should be used only when you are using similar-size glass bottles. For pint (330 mL) bottles, add 250 mL (1 cup) of priming sugar to beer and stir well to dissolve. Then siphon beer into the bottles and cap immediately. If you are using all quart (500 to 600 mL) bottles, add about 150 mL (⅔ cup) sugar.

2. Bottle priming, which means adding sugar to each bottle before pouring in the beer. More work, but each bottle contains the right amount of carbonation. Add 5 mL (1 teaspoon) sugar to each glass bottle, 7 mL (1½ teaspoons) to each plastic bottle, and 15 mL (1 tablespoon) to each 5-litre mini-keg. Siphon beer into bottles, cap immediately and invert bottles 4 times to dissolve sugar.

The important step is the conditioning sequence. For the bottle fermentation to take place and generate CO_2, the beer must be at warm room temperature, as when fermenting beer in the bucket. Place bottles in a warm spot in the dark and leave them undisturbed for 10 days. A good way to tell how the conditioning is coming along is to bottle at least one plastic pop bottle for each batch. As the beer carbonates, the plastic bottle will harden as the pressure builds, telling you everything is progressing normally. After 10 days, move bottles to a cool location to allow beer to clear and age. During this process, sediment will form in the bottles. This is the spent yeast going dormant after all the sugar is consumed. Sediment is unavoidable in naturally carbonated beer. In theory, your beer is ready to drink after two weeks, but many people will be disappointed. The longer the CO_2 is under pressure in the bottle, the smaller the CO_2 bubbles will be when they finally escape. Smaller bubbles mean a finer, longer-lasting carbonation and better head formation and retention, at its peak after three months of aging. Some people believe that filtering beer before bottling will stop sedimentation. The problem is that if you use a filter fine enough to remove all yeast sediment, no carbonation will occur and the beer will be flat. The only way to produce sediment-free beer is to carbonate it artificially, like commercial brewers.

One other point about head retention. Full-bodied beer has much better head retention potential than light-bodied beer. It's unrealistic to expect a Canadian-style lager to have a head as smooth, creamy and long lasting as an Irish Stout!

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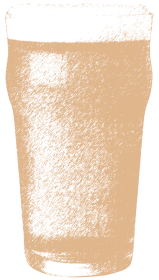

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Hop Varieties and Uses

The hop varieties described below are the most commonly used in beer making, and are usually available at Winexpert retailers. Each description includes the style of beer for which it is most commonly used and the alpha acid or bittering potential.

Please note that the information in this pamphlet, particularly the alpha acid content, is given as an indication only, as the alpha acid content varies slightly from crop to crop.

Hops fulfill two different purposes in the brewing process: to provide the bitterness that balances the natural sweetness of the barley malt and to add original floral flavors. The alpha acid (AA) content determines the hops' potential bitterness. Hops low in AA are used for flavoring. Some hops, such as Cascade, have a medium AA level and are used for both bittering and flavor, and are known as combination hops.

In the brewing process, bittering hops are added at the beginning of the boil to get the maximum extraction. Flavor hops are generally added 10 minutes before the end of the boil. To amplify the more delicate aromas destroyed by heat, more hops are added in a process called dry hopping. For a 23-litre batch, add 30 g (1 ounce) of hops directly to the fermenting vessel after the boil. Another way to get a big hop flavor and aroma is to make hop tea just before bottling or kegging the beer. Steep 30 to 55 g (1 to 2 ounces) of hops or hop pellets in 2 litres (8 cups) of hot water for 6 to 8 minutes, then immediately add to the beer with the priming sugar. Bottle immediately. This is a particularly effective way to improve the hop flavor and aroma of canned beer kits, which tend to be very low in hop aroma due to the canning process. Some people prefer to add hops before fermentation, some after. If you add them after fermentation, leave the beer in the carboy for an extra seven days.

Bullion: The classic bittering hop of Guinness, stouts and porters. Alpha Acid 8.0 - 9.0%.

Cascade: The flavor hop of American pale ale, also used for bittering. Alpha Acid 4.5 - 7.0%.

Chinook: Popular high alpha American bittering hop with a piney aroma. Alpha Acid 12.0 - 14.0%.

Cluster: The oldest American-grown variety, a mild bittering hop. Alpha Acid 6.0 - 8.0%.

Fuggles: The flavor hop of English-style ales, has an earthy flavor. Alpha Acid 4.0 - 5.5%.

Galena: Very high alpha American Pacific North-West bittering hop. Alpha Acid 12.0 - 14.0%.

U.K. Goldings: Noble British flavor hop of Bass Pale Ale and export bitters. Alpha Acid 4.5 - 5.5%.

Hallertau: Noble German hop used for Bavarian-style lagers. Flowery aroma. Alpha Acid 3.5 - 5.5%.

Liberty: Excellent American finishing (flavor) hop derived from Hallertau. Alpha Acid 3.0 - 5.0%.

Mt. Hood: Another American Hallertau derivative used as a lager flavor hop. Alpha Acid 5.0 - 8.0%.

Northern Brewer: Classic bittering hop of Anchor Steam Beer. Minty flavor. Alpha Acid 8.0 - 10.0%.

Nugget: A super-high alpha bittering hop used for English-style ales. Alpha Acid 12.0 - 14.0%.

Perle: Medium alpha bittering hop used as a substitute for Hallertau. Alpha Acid 7.0 - 9.5%.

Pride of Ringwood: From Victoria, Australia, the classic hop of Fosters Lager. Alpha Acid 7.0 - 9.0%.

Czech Saaz: Noble Bohemian hop used for Pilsner Urquell and German pilsners. Alpha Acid 3.0 - 4.5%.

Tettnanger: Spicy bouquet, used for German-style lagers and wheat beers. Alpha Acid 4.0 - 5.0%.

Willamette: An American derivative of Fuggles, used for English-style ales. Alpha Acid 4.0 - 5.0%.

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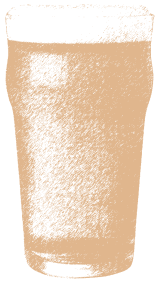

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