



Midwest Homebrewing & Winemaking Supplies
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How can I make my beer clearer or brighter?

Yes, we know that many of you just getting into this refreshingly rewarding hobby would like their beer to look better. Fermentation is a messy process, and sometimes leaves undesirable sediment behind. The big commercial breweries use advanced filtering techniques to “brighten” their beer, but there is another thing that the big boys use that is more accessible to the average homebrewer—fining agents. There are also some simple techniques you can use to help achieve better clarity. Following these simple tips, it’s relatively easy for the homebrewer to make their beer much clearer.

So what is it that makes your beer cloudy? Three things: tannins, proteins and yeast. Tannins occur naturally in the barley grain husk, and they may be extracted along with sugars during the mashing process, or when steeping grains when brewing with extract.

Proteins are present in all grains, including malts, higher kilned malts, wheat malt, oats, and flaked barley. They are also going to be present to some extent in malt extracts. While proteins enhance the body and head retention of a beer, they also hinder clarity. It is a somewhat delicate balance to create a full bodied beer without excessive protein. You may observe some of these proteins causing “chill haze”—when your clear beer will turn hazy once put into the refrigerator and chilled. There are fining agents that can help reduce chill haze.

Yeast is present in the beer during fermentation and will remain suspended in the beer for some time. Most yeast will eventually precipitate to the bottom of the beer, but it takes considerable time for many yeast strains.

Select Lower Protein Grains

Proteins enhance the body of your beer, but can hurt clarity. Save high protein adjuncts like wheat, flaked barley for wheat and dark beers where clarity is not a significant consideration. If you are brewing a light beer where clarity matters, choose two row pale malt or pale malt extract base and add only enough high protein malts to achieve the desired color and body.

Use a wort chiller to cool your wort quickly

A wort chiller is THE BEST way to cool your beer as quickly as possible. When you bring your wort from boiling down to below 80°F quickly, most of the undesirable matter (tannins and proteins) tend to clump and fall out to the bottom of your brew pot. When those tannins and proteins don’t even make it into your fermenter, your beer will definitely be clearer. Ideally, you want to chill your boiling wort down to pitching temperature in 15 minutes or less. Any of the wort chillers sold by Midwest will do this; the chiller you choose is dependent on your skill level and brewing setup. [Click here for more info on wort chillers.](#)

Use a highly flocculant yeast strain

Flocculation is defined simply as the rate at which a particular yeast strain will fall out of the beer once fermentation is complete. If you choose a yeast strain with a high flocculation rating, it will clear much more quickly than one with a low flocculation rate. Flocculation should not be your only consideration, but if you have a choice, pick a yeast strain that both matches the style of your beer and has medium to high flocculation.

Cold store (Lager) your beer

Lagering is storing your beer in a refrigerated environment (ideally 33-35°F). If you have the ability to do this, it is easily the easiest and most effective way to clear your beer. At these lower temperatures, it becomes much more difficult for those tannins, proteins and yeast to remain in suspension. Lagered beer will clear far more rapidly than beer stored at room temperature. However, you should note here that if you are bottling or naturally carbonating a keg, you need to wait for the beer to become fully carbonated before lagering. Otherwise you may slow or kill the yeast, resulting in a poorly carbonated beer. Alternately, you could add a small amount of rehydrated dry yeast (say 1 gm., 1/2 tsp. or so) after you’ve lagered (or cold conditioned, same thing) the beer to ensure there will be enough yeast in suspension to carbonate the beer after bottling (or kegging if you’re not force carbonating). This small amount of yeast should not create much sediment in the bottle or keg.

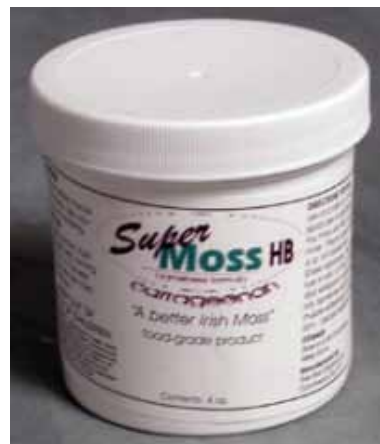
Use fining agents

There are a number of fining agents available to the homebrewer that will greatly improve the clarity of their beer. These agents clear your beer by attaching themselves to the proteins, yeast and tannins, making them heavier so that they will fall out of suspension and settle to the bottom of your fermenter or bottle quickly. All fining agents that are added post fermentation will act quickly and more effectively if added to cold beer. Here's a list of all of the fining agents offered by Midwest with a short explanation of what they do.



Irish Moss: A seaweed derived fining. Accelerates protein coagulation during the end of the boil which helps prevent chill haze. Many of our brewers use this product in every batch. Use 1 teaspoon per 5 gallon batch, added with 15 minutes remaining in the boil.

Gelatin finings: A positively charged fining agent for wine and beer, and are the most powerful of the organic finings. Using more than the recommended amount will remove too much of the color and flavor compounds from wine and some of the body from the beer. This fining is derived from the hooves of horses and cows, gelatin has a positive charge that will aid in attracting and settling suspended yeast. Dissolved and prepared gelatin is added 1-2 weeks before bottling the beer. Prepare the gelatin by adding 1 tablespoon to 1 pint of cold water and gently heat until dissolved. Do not boil the gelatin solution. Add the solution to the beer and allow 1 - 2 weeks to settle out before bottling your beer.



Whirlfloc Tablets: Whirlfloc is refined kappa carrageenan with some talcs to help in tabulation. Basically, it's like refined irish moss in tablet form. There is no need to rehydrate, and one tablet is enough for a 10 gallon batch. For 5 gallon batches, cut a tablet in half. You won't really hurt anything by adding a whole tablet to a 5 gallon batch, but since one tablet is actually 2.5 times the dosage recommended by Midwest, you'd just be wasting money. Do NOT add Whirlfloc any earlier than 10 minutes before end of boil; Midwest suggests adding it with 5 minutes left in the boil. It acts immediately and at really needs only 5 minutes in the boil to be effective. If it is in the boil for too long you will denature the carrageenan and negate its effects.

Super Moss HB: This product was developed by Five Star Chemical for use in breweries around the world. It is a proprietary blend of negatively charged, red seaweed based, Kapa and Lambda carrageenans. It is designed to attract the positively charged haze forming proteins together in the brew kettle and primary fermenter, then settle out. Super Moss HB helps prevent chill haze. Must be diluted in cooled wort before adding to the boil. To do this, pull half a cup or so of wort out plenty of time ahead so that it will cool. Add 1/4 teaspoon to this cooled wort and then stir it in during the last ten minutes of the boil.



Isinglass Powder: Used to help clear sediment from a beer or wine. Dissolve 1/4 teaspoon of isinglass powder in 1 cup of cold water for five gallons. Add to beer or wine just after transferring into the secondary fermenter. Allow at least two weeks for the beer or wine to clear, but it may clear in as little as 3 days.

Isinglass Liquid: Same as isinglass powder, but in liquid form. Add 2 oz. to any beer or wine just after transferring into the secondary fermenter. Allow at least two weeks for the beer or wine to clear, but it may clear in as little as 3 days.



Biofine Clear: A clarifier made from Silicic Acid, SiO₂, and is added to the secondary during the transfer from primary to secondary to precipitate yeast and other haze-causing particles. Biofine is a vegan product and is not derived from animals or animal by-products. Use can be as little as 1/4 Tbsp (1/10th fluid oz. or 3 ml) to as much as 2 Tbsp (1 fluid oz. or 30 ml) per 5 gallon batch of beer or wine.

LQ Super-Kleer KC Finings: A liquid finings solution that is a 2 stage clearing agent for beer and wine. 1 pack will work on up to 6 gallons of wine or beer at a time. Super Kleer is able to clear the beer or wine in 12 - 48 hours. It is made up of 50ml Chitosan and 15ml Kieselsol.