Tech Corner

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What are beer finings and when do you use them? Beer haze can be caused by many factors, but three common causes of beer haze are poorly flocculating yeast, high molecular weight polyphenols (tannins), or high molecular weight proteins. Fining agents are used to reduce beer haze caused by these sources. Usually, fining agents are added during secondary fermentation or later; however, some are used in the brew kettle during boiling.

Isinglass is a type of fining used in beer to assist with yeast flocculation. Isinglass finings are made from the swim bladder of certain tropical fish, in particular the sturgeon. The swim bladder is an almost pure form of collagen which is a protein. These finings are normally added during secondary fermentation, or if bottle conditioning, they are added at the bottling phase just prior to priming. During secondary fermentation, beer is typically at a pH between 4.0 and 4.5. At this pH, collagen is positively charged and attracts yeast which is negatively charged. The result of this interaction is the yeast will settle or flocculate at a faster rate.

To use Isinglass, add a 2 ounce liquid package, purchased from your local homebrew store, for a 5 gallon batch of beer. The yeast will interact with the isinglass and within two to three days the yeast will flocculate and settle at the bottom of the fermentation vessel. Isinglass works best at a temperature range between 50 °F and 60 °F. Be aware that Isinglass will lose its effectiveness if stored at a temperature above 65 °F. Also, isinglass does not help reduce beer chill haze.

The next fining agent that we discuss is polyvinylpolypyrrolidone (PVPP) which is a plastic that is ground into a fine powder. This fining is used to reduce beer haze caused by polyphenols, or tannins. PVPP is often sold under the name Polyclar.

To use PVPP, add about 10 grams per 5 gallons of beer during maturation. Within a few hours, PVPP will absorb tannins and help remove the haze caused by the polyphenols. Note that PVPP does not affect beer foam stability; however, in very high concentrations it can diminish beer color and hop flavor.

Finally we discuss Irish Moss which is a refined sea weed. Most proteins that cause haze in beer have a positive charge at pH levels below 6.0 while Irish moss has a negative charge. Therefore, Irish Moss will combine with the unwanted proteins to help reduce protein haze.

This fining is normally added during the last 15 minutes of the boil. For a 5 gallon batch of beer use about a teaspoon of flaked Irish Moss.

If you would like to read more about fining agents here are two good resources:

An Analysis of Brewing Techniques, by George and Laurie Fix

Homebrewing Guide, by Dave Miller.