



FININGS PRODUCTS USED IN BEER

Isinglass Usage

Ready-for-use isinglass finings is used at a rate of between 8 to 20 milliliters per litre of beer. That works out at between 200 and 500 milliliters of finings for 23 or 25 litres of beer. 250 milliliters is a good starting point. Pre-mix it with a little beer, about the same amount as the finings, before gently adding it to the cask. Gently stir it in, taking care not to introduce any significant amount of air into the beer.

The lower the temperature of the beer, the greater the fining action will be. If the beer is chilled sufficiently to throw a chill-haze before adding the finings, a substantial amount of the chill haze component will also be removed, giving a more stable beer. If your beer does not have the clarity you expect, and if you can be sure that it is due to yeast in suspension and not due to some other cause, then increase the amount of finings for future brews.

Gelatine

Gelatine is the traditional fining agent used by home brewers, although commercial brewers do not use it. It is not as efficient as isinglass, but it is a lot less hassle to make up, is stable in storage (dry), and is hell of a lot cheaper. It is technically a charge-based fining system, but the electrostatic charge and isoelectric point of gelatine is highly dependant upon the material it is made from and the manufacturing process, and could easily be outside the pH range of beer. We have no control of this with the usual stuff purchased at supermarkets, but it still seems to work fine, nevertheless, so perhaps it relies on its inherent "stickiness" to perform its fining action rather than charge attraction. Packets of gelatine are available in the baking section of all supermarkets. Usually you get five or six 10 to 15 gram sachets in a packet. One sachet of unflavoured gelatine is enough to treat 23 litres of beer. If it is supplied loose, then go for 15 grams for 23 litres. Making it up is simplicity itself and should be made up immediately prior to use. Empty the sachet or put 15 grams of gelatine into a mug and add a tablespoonful (about 20 ml) of cold water. Leave to stand for ten minutes to allow the gelatine to absorb the water, just like re-hydrating yeast. Boil some water and allow it to cool slightly, 85°C is about right, and add sufficient water to the gelatine to bring the volume up to about 100 millilitres. Stir well until the gelatine has dissolved. Cover the mug with a saucer and allow to stand for at least ten minutes.

Do not add boiling water directly to gelatine as it may denature it. However, apparently the ability of gelatine to actually gel is not important when it is used for fining. In fact, a non-gelling form of gelatine, known as hydrolyzed gelatine, is said to be superior to the ordinary stuff for fining. Best to be on the safe side though and try to avoid boiling it. Hot water not only helps the gelatine to dissolve, but also provides a pasteurisation function, hence the standing period. The water needs to be hot enough to facilitate the pasteurisation process, such that the temperature after mixing is 75°C or above. There is no need to mess around with thermometers - guesswork is good enough. Once the temperature has dropped naturally to below about 55°C it is safe to add it to the beer in the same manner as for isinglass finings above. That is, gently premix it with about 250 millilitres of beer and gently stir that into the bulk of the beer.

Chill-Haze Prevention (Chill Proofing)

Chill haze is a common problem with home brewed beers and even with commercial real ale that has been chilled excessively. This is a protein haze that forms when the beer is chilled, which brings the protein out of solution which then becomes visible, but the haze goes away again as the beer warms back up. Protein hazes are quite tasteless and do not affect the flavour of the beer, so most home brewers tend to ignore it if one develops, bearing in mind that real ales are not usually consumed chilled. There is always the pewter tankard if one is worried about the haze. Remedies, or partial remedies, are available for chill haze. Chill-proofing compounds are not often used by home brewers, but there are no gotchas in using them, so only brief mention of them will be made here. The use of silicated auxiliary finings, mentioned earlier, will go some way in removing chill-haze forming components and would probably be sufficient for real ales at least.

Whirlfloc Tablets

Whirlfloc tablets, like Irish moss, is derived from seaweed, but also includes additional purified carrageenan, which is the active ingredient in Irish Moss.

One tablet is added per 23 litres of wort during the last 10 minutes of the boil.

Since it shares the same active ingredients as Irish moss, whirlfloc does a great job precipitating proteins at the end of the boil.

PVPP

PVPP is, polyvinylpolypyrrolidone, but a food-grade version. This reduces haze potential by adsorbing polyphenols. A common trade name for the stuff is Polyclar. It is a porous synthetic absorbent that complexes preferentially with polyphenols which then settles out. It also reduces the potential for oxidation of the beer. It is usually used at 200 to 600 milligrams per litre. About 7 grams is the happy medium for 23 litres. Add it to about ten-times its own weight of beer or water, about 70 millilitres, stir vigorously, and leave to stand for thirty minutes to hydrate, stirring frequently. It needs a lot of stirring, so your trusty hand-held stick blender can be pressed into use again. Just before use, mix the prepared slurry with a little beer, stir vigorously, add to the bulk of the beer and mix in. It can be used in conjunction with, and at the same time as other clarification aids, such as silica xerogel or auxiliary finings. PVPP slurry is best added to the racking vessel at the time of filling it, and mixed well in. This enables the beer to be racked off the additives when it is transferred. Store at room temperature.

Silica Gel

Silica Hydrogel and Silica Xerogel are similar products. They reduce haze potential by adsorbing protein. Xerogel is the most effective. It is generally used at 100 to 200 milligrams per litre. It is mixed into a slurry with about ten times its own weight of water and then added to the beer and mixed in. It is best added to the racking vessel at the time of filling it, and mixed well in. It is left to do its job and settle out and the beer is racked off the sediment. A common trade name for silica hydrogel/xerogel is Lucilite, which is available in various types and grades. It can be used in conjunction with, and at the same time as, PVPP. It is not often used in home brewing for some reason, and I have not seen it in home brewing shops or on their web sites.