

# Cold Crashing Beer and Clarification



- By Steve Hackman and Travis Taylor

# What is Cold Crashing?

Cold crashing is a process that involves rapidly lowering the temperature of beer after it's finished fermenting. This improves the beer's clarity and reduces the time it needs to age.

How it Works:

- **Flocculation:** Cold crashing speeds up the process of flocculation, where yeast clumps together and falls out of solution.
- **Temperature:** The beer's temperature is lowered to just above freezing, or around 34–40°F.
- **Time:** The beer is held at this temperature for about 24 hours.

Why this done:

- **Clarity:** Cold crashing makes beer clearer by removing floating particles like yeast, hops, and fruit.
- **Aging time:** Cold crashing reduces the amount of time beer needs to age.

How to do it:

- The best/easiest way is to move your fermenter into a refrigerator or freezer (that is temperature controlled).
- I use a chest freezer with an InkBird controller.
- You can gradually reduce the temperature by 3–5°F per day to allow the yeast time to adjust.
- Relax have a HOMEBREW!

# Clarifying with Gelatin

- The most common use rate for gelatin is 1g of gelatin for each gallon of beer.
- A good supplier of gelatin is LD Carlson, also plain unsweetened gelatin at your favorite grocery store works.
- Dissolve the gelatin in 2oz of water per gram of gelatin. Using this rate it takes 5 grams of gelatin dissolved in 10 ounces of water to dose a 5 gallon batch of homebrew.
- To dissolve and rehydrate the gelatin powder sprinkle it onto the cool water and give it a gentle initial mix then allow it to rest for 15-30 minutes depending on how patient you are.
- After allowing it to “bloom”, stir the mixture together until you don’t see any more solids.
- Heat the solution on the stove top or in the microwave until it is at least 160F. If using a microwave heat slowly in bursts and check temperature.
- Pour the mixture into the already cold fermenter (<50F minimum, <35F even better) and agitate if possible to disperse the mixture a little better in the beer.
- Let the fermenter rest cold for 2-3 days or longer then rack to bottles or a keg.

# Types of Clarifying Agents

- Isinglass- A collagen-based additive derived from fish bladders, Effective against yeast, proteins, and polyphenols.
- Bentonite-A negatively charged clay colloid that reacts with positively charged proteins, used in white wines and juices.
- Gelatin- A positively charged fining agent that attracts negative particles and excess tannins. Using too much gelatin can remove color and flavor compounds from beer
- Whirfloc tablets- A blend of Irish moss and purified carrageena that can be added to homebrew beer to reduce haze
- Irish Moss- Seaweed based. Added at end of boil.
- Biofine Clear- A vegan clarifier that uses silicic acid to remove haze forming protein particles.

# Types of Clarifying Agents

- Chitosan-An effective fining agent that doesn't usually impact aroma or taste
- Pectinase- A pectic enzyme that can help clear pectic haze from fruit beers or cider. Added before fermentation.
- Papain- Is known as a proteolytic enzyme that is extracted from the skin of the papaya. Not often used and with cautions as to how much is used.
- PVP- polyvinylpyrrolidone/Polyclar. Plastic. Electrostatically attracts tannin molecules as it falls to the bottom.
- Activated Silica Gel- Used by commercial brewers, acts similar to Polyclar except it attracts protein molecules versus tannin.



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