



### Instructions for Making Hard Apple Cider - starting with 1 gallon juice

1. **Make room for fermentation:** Remove about 2 cups of juice from gallon jug to make space for fermentation foaming or split the juice between two jugs.
2. **Test Juice:** Measure sugar content with hydrometer; record reading to calculate alcohol by volume post-fermentation. Can also test acidity with acid test kit and adjust acidity now or post fermentation.
3. **Prep Juice:**
  - a. If juice has been *pasteurized*, then proceed to Step 4.
  - b. If juice is *unpasteurized*, add  $\frac{1}{2}$  crushed Camden tablet (or  $\sim 30$  p.p.m.  $\text{SO}_2$ ) per gallon of juice and wait  $\sim 6$  hours before proceeding to Step 4.
4. **Add yeast and nutrients:** Add  $\frac{1}{2}$  teaspoon ( $\sim 2$  grams) of yeast nutrient (Fermaid K) per gallon of juice. Carefully swirl to mix. Add  $\frac{1}{4}$  teaspoon ( $\sim 1$  gram) dry yeast per gallon of juice by sprinkling across the surface of the juice. After a few minutes, gently swirl to mix. Attach filled fermentation lock (with light sanitizer solution, clean water, or vodka) with stopper to jug(s). Move to a temperature stable location away from direct light, between 60-70 degrees F. for 2-3 weeks.
5. **Racking (a.k.a. Transferring):** Once visible signs of fermentation (foaming, activity in airlock) end and cider begins to clear, transfer it by siphoning off the sediment to a sanitized jug.\* If there is any space in the top of the jug, fill it into the neck with a commercial dry cider or white wine. The idea here is to minimize the air sitting on the surface of the cider which can spoil it. Replace the filled airlock and store again for a month.

\*This is a good time to take another sample for a sugar reading with a hydrometer to confirm that the fermentation is finished (no sugar left) and to calculate alcohol content. Also, the acidity can be tested with an acid test kit, then adjusted if desired.

BAD: Left container not topped up. Large surface area exposed to air.



GOOD: Right container topped up into neck. Small surface area exposed to air.

6. **Age or Bottle?** After a month or so, the cider should have continued to clarify. It can be transferred once again off any sediment and aged further for a cleaner taste and appearance, or it can be bottled. A taste test can be helpful at this point.
  - a. If the choice is to age it further, go to Step 7.
  - b. If the choice is to bottle proceed to Step 8.
  
7. **Age with sulfites:** Before the cider is transferred again, sulfite should be added to protect it from oxidation and spoilage during aging. Do this by adding a ½ crushed Camden tablet per gallon. This should be done at least a few hours before transferring or the day before. Then as before, transfer cider by siphon off the sediment into a sanitized jug, again topping up into the neck. Put the filled fermentation lock back on and continue to age in a cool (~60 degrees F.) dark place for 1 to 2 months more. *Sparkolloid* can be added at this time to increase clarity.
  
8. **Bottle:** At this point, the decision should be made as to whether the cider will be bottled *still* or *sparkling*.
  - a. *Still:* Using a bottle filler, siphon the juice into clean and sanitized glass bottles. A cork or crown cap may be used as a closure. If residual sweetness is desired, add *Wine Conditioner* as indicated on the bottle.
  
  - b. *Sparkling:* Fresh yeast and sugar need to be added to carbonate the bottles. Boil 1.2 ounces (by weight) (about 1/5<sup>th</sup> of a cup) per gallon of cider to be bottled, in a small amount of water for 2 minutes. The cider should be transferred by siphoning away from the sediment one final time into a clean and sanitized container. Stir cooled sugar solution gently into the transferred cider. Rehydrate ¼ - ½ teaspoon of champagne yeast in a small amount of unchlorinated water for 5-10 minutes; then gently stir this into cider. With a bottle filler attachment, siphon cider into sanitized pressure-tolerant bottles (crown cap or swing-top). Once capped, store in ~70 degree F. area for 2 weeks. Then chill a bottle and taste. If this bottle is carbonated, all the bottles should be carbonated and can be moved to a cool storage area.