



Cider Making

Or how to turn sweet cider into a tasty alcoholic treat

Your version of hard cider is only limited by your imagination. Hard cider can be sweet, semi-sweet, dry, still or sparkling. Some folks add additional sugars or spices or fruit. Experiment with different yeasts to bring out different flavors and aromas or allow your cider to ferment using the wild yeasts from the apples. Make your hard cider according to your taste.

Cider Making Procedure:

1. Test specific gravity.

Estimated alcohol content at different starting gravities:

Original Gravity	Estimated Final Gravity	Alcohol by Weight/Volume
1.050	.990	6.3% abw or 7.9% abv
1.060	.990	7.3% abw or 9.2% abv
1.070	.990	8.4% abw or 10.5% abv

Increasing Sugar Content:

Most cider is naturally around 1.050 specific gravity. Cider should have a minimum original gravity of 1.045 to ensure shelf life. Should you want to increase the specific gravity, you may add table sugar, brown sugar or honey. This table indicates how much sugar you should add to one gallon of cider to raise the specific gravity as indicated:

Specific Gravity Increase	Additional Sugar per Gallon	Additional Honey per Gallon
.005	2.25 oz.	3 oz.
.010	4.5 oz.	6 oz.
.015	6.75 oz.	9 oz.
.020	9 oz.	12 oz.

Example: To increase the specific gravity of one gallon of cider from 1.050 to 1.060, one would add either 4.5 oz. of sugar or 6 oz. of honey to the cider

2. In a sanitized fermenter, combine five gallons of cider, ¼ teaspoon potassium metabisulfite (or 2 crushed Campden tablets) , 5 teaspoons of yeast nutrient and honey or sugar to increase the specific gravity (if desired). Add yeast immediately.

Sanitation:

Sanitation of the cider ingredients is achieved through the use of potassium metabisulfite that can be added as a crystalline powder or as Campden tablets. The active ingredient of both potassium metabisulfite and Campden tablets is sulfur dioxide. The Campden tablets do not readily dissolve, it is best to crush and dissolve them in a bit of cider before adding to the fermenter. When combined with a liquid, potassium metabisulfite produces sulfites that inhibit wild yeast and bacteria.

- Inoculate with desired yeast and let the fermentation begin. If the cider yeast is added and it does not show signs of fermentation within 12 hours or so, you should stir the cider vigorously with a sanitized spoon to drive off some of the sulfur dioxide so that the yeast will begin to ferment.

Yeast Selection:

Some cider makers do not add potassium metabisulfite and allow the cider to ferment using wild yeast that occurs naturally. Because wild yeast is unpredictable, most cider makers use a commercially available wine, beer, cider or mead yeast.

Yeast Strain	Profile
Champagne (dry)	Alcohol tolerant, extremely dry, very little apple flavor. Least favored yeast.
Nottingham yeast (dry)	Alcohol tolerant to 8%, some residual sugar, fruity with some apple flavor.
Sweet Mead (liquid)	Alcohol tolerant, leaves 2-3% residual sweetness, lots of apple character, our favorite yeast.
English Cider (liquid)	Classic cider yeast. Ferments dry, but retains flavor from apples. Sulfur is produced during fermentation, but will disappear in first two weeks of aging. Optimum fermentation temperature: 68-75.

- Fermentation will take approximately 1-2 weeks. Transfer to the secondary when the bubbles in the airlock are approximately 2 minutes apart. Allow the cider to age and clear in secondary. Patience and successive rackings will produce a wonderfully clear cider. "Cold shocking" by putting the secondary in a cold place (30-45°F) for a few days also aids in clearing. Should the clearing process need to be hurried along, Sparkolloid or gelatin in the secondary works wonders. Note that Sparkolloid requires some tannin in the juice to be effective.
- Once the cider is finished fermenting and is clear, it is time to tweak to your taste. Consider this part of the art, rather than the science of cider making.

Tips and Tricks for Tweaking

- Sweet and carbonated is the most difficult cider to make, unless you have a kegging system. In a bottle, yeast is required to create the carbonation. However, if yeast is present, it will consume all of the available fermentable sugars in the bottle and become drier and over-carbonated. The best way to have sweet, carbonated cider is to sweeten the cider with lactose, a non-fermentable milk sugar. One half to one pound of lactose in 5 gallons should produce a sweet cider. Prime with 1/3 to 1/2 cup of priming (corn) sugar to create modest carbonation. Lactose may not agree with your lactose intolerant friends...
- Dry, sparkling cider-Allow the cider to ferment to .999 or less. Prime with one-half cup corn sugar. Bottle in beer or champagne bottles. The carbonation will pop corks out of a regular wine bottle. Domestic champagne bottles will accept crown caps.
- Sweet, still cider-Allow the cider to ferment to .999 or less. At least a week before bottling, add ¼ teaspoon potassium metabisulfite *per 5 gallons* and ½ teaspoon potassium *sorbate per gallon* to prevent re-fermentation. An alternate method to stop re-fermentation is to heat to 120°F (stir constantly) and cool. Sweeten to taste with sugar, honey, apple juice or frozen apple juice concentrate prior to bottling. Six ounces of sugar per gallon will result in a medium sweet cider.
- If you have a kegging system and the cider will be consumed in a short period of time, just rack into the keg and sweeten. If the cider re-ferments and becomes too dry, sweeten it again. We like to use apple juice or frozen apple juice concentrate to sweeten. If longer term storage is desired, consider using ¼ tsp potassium metabisulfite *per 5 gallons* and ½ teaspoon potassium *sorbate per gallon* to prevent re-fermentation.