

Cider Revolution

Making Great Cider from Everyday Ingredients

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Overview

- Cider Basics
- Ingredients
- Process
- Acid and Tannins
- Tips on Making Ciders
- Putting It All Together

What is Cider?

- Fermented apples or apple juice
- Can be extended to include perry (pear cider)
- Standard Cider and Perry (BJCP Cat 27)
 - 27A Common Cider
 - 27B English Cider
 - 27C French Cider
 - 27D Common Perry
 - 27E Traditional Perry
- Specialty Cider and Perry (BJCP Cat 28)
 - 28A New England Cider
 - 28B Fruit Cider
 - 28C Applewine
 - 28D Other Specialty Cider/Perry

Traditional vs. Nontraditional

- Traditional
 - Made using blends of varietal apples
 - Generally specialty cider apples - bittersharp, bittersweet
 - Involves pressing apples
 - Wine or Cider Yeasts
 - 6-12+ months of aging
- Nontraditional (Focus of this talk)
 - Common ciders made with grocery store juice
 - Conducive to fruit and specialty ciders
 - Can be made with beer yeast
 - Much shorter aging times (1-8 weeks)

General Process

- Very quick "brew day" - 15-30 mins
 - Add juice to sanitized fermenter
 - (optional) Add pectic enzyme and wait 12-24 hours
 - Add nutrients
 - Pitch yeast
 - Oxygenate / Aerate
- Fermentation / Aging (1-8 weeks)
 - Ferment out all the way (around 1.000 FG)
 - Add fruits, spices, or oak (if desired)
 - (optional) Age until clear
 - Stabilize and backsweeten (optional), bottle/keg

Ingredients

- Apple Juice
 - (or Pear)
- Nutrients
- Yeast



Photo credit: Brian Trout

Ingredients - Apple Juice

- Will any juice work?
 - Almost any - cannot contain sulfites / sulfates
 - I have never found a juice that won't work
- I prefer filtered over organic
 - Subjective - didn't care for the one organic batch I tried
- I typically use juice from local grocery stores, whatever is cheapest
 - Look for sales
 - Typical price - about \$20 for 5g
 - Costco carries Kirkland juice that is not from concentrate
- Optional: Additional sugar to increase ABV

Ingredients - Nutrients

- Nutrients are important - unlike wort, apple juice lacks nutrients
- Recommendations for 5g batch
 - 1/2 tsp Fermaid-K
 - 1/4 tsp DAP (Diammonium Phosphate)
- For low-gravity ciders, no need to stagger
 - More relevant for meads and applewines



Ingredients - Yeast

- Traditionally wine or cider yeasts have been used
- Wine yeast - can require longer aging
- Cider yeast - lots of sulfur produced, low alcohol tolerance
- I prefer beer yeast, particularly Belgian
 - Belgian esters work well with the fruits in the cider
 - Cal ale or English yeasts can work very well too.
 - Experiment
 - Dregs from bottles can be used too - "Party Cider"

White Labs / QUAFF Yeast Experiment

- 7 selected yeast strains, all brewed using same process and ingredients
 - WLP002 - English Ale
 - WLP028 - Edinburgh Ale
 - WLP500 - Trappist
 - WLP575 - Belgian Blend
 - WLP775 - English Cider
 - WLP810 - SF Lager
 - WLP862 - Cry Havoc
- Temperatures: midpoint of recommended ranges



Photo credit: Larry Stein

Yeast Experiment Photos



Photo credit: Larry Stein

Yeast Experiment Photos (2)



Photo credit: Larry Stein

Yeast Experiment Results

Yeast	Judges	Cidermakers	Public	Overall Rank
WLP002 - English Ale	2	1	1	1
WLP028 - Edinburgh Ale	1	2	3	2
WLP862 - Cry Havoc	3 (tie)	3	2	3
WLP775 - English Cider	3 (tie)	4	4	4
WLP500 - Trappist Ale	5	6	5	5
WLP575 - Belgian Ale Blend	6	5	6	6
WLP810 - SF Lager	7	7	7	7

Yeast Experiment Notes

- Ciders were not backsweetened, and sweetened versions could have very different results
 - The favorite was WLP002, which came out sweetest
 - Indicates preference for sweeter ciders
- The lager strains may not have had enough time to age, especially WLP810

Process

- Tools
- Fermentation
- Aging / Conditioning
- Backsweetening
- Stabilization
- Carbonation



Photo credit: Brian Trout

Process - Tools

- More basic than even extract brewing
 - Great for beginners - low startup cost
- 5-6.5g fermenter: carboy, better bottle, etc.
- Food-grade funnel
- Airlock or blowoff hose
- Packaging equipment (kegging preferred)

Process - Tools (Small-Batch Cider)

- Small batches can be fermented right in the 1 gallon juice jugs.
- Just add yeast!
- Jugs are reusable for small-batch experiments



Process - Fermentation

- For WLP500, moderate room temp (~75F) works well
- I don't usually bother with temp control for ciders, as beers take priority.
 - Note: I live in an area with very moderate temps.
- Ciders have proven to be very forgiving, temperature-wise.

Process - Aging / Conditioning

- Optional, but recommended
- If aging on fruits or oak, 2-6 weeks to develop character
- Can achieve a clear cider if aged long enough
- My record is brew day to serving in 5 days
- Lately, I have been aging until the cider drops clear, 3-8 weeks.
- Secondary is optional, I only use secondary for yeast reuse purposes

Process - Backsweetening

- I find completely dry ciders made using this process somewhat unpleasant - tart and too dry
- I typically backsweeten about 10%
 - 1/2 gallon of juice (or equiv) to 4.5 gall cider
- Fruit juices or syrups can be used instead of apple juice to achieve other flavors
- Added at kegging
- Requires special considerations in packaging

Process - Stabilizing

- Backsweetened ciders can NOT be bottle conditioned as-is - bottle bombs
- Ok to serve straight from keg or bottled still and kept cold
 - Otherwise, stabilization is required

Process - Stabilizing (2)

- I use (added at kegging):
 - 4-5 campden tablets (Potassium Metabisulfite)
 - AND 3-4 tsp Potassium Sorbate
- Using both will ensure that yeast are stopped and do not restart



Photo credit: Brian Trout

Process - Carbonation

- Force carbonate
- 2-3 volumes of CO₂
- If not kegging:
 - You can either drink the cider still (uncarbonated), which is ok by style guidelines
 - or, not backsweeten and bottle condition
 - (or use artificial sweeteners, but don't do that)

Acid and Tannin

- Recent experiments to make more traditional ciders without traditional apples
- Deficiencies are acid (malic) and tannins
- I have been experimenting with adding malic acid and wine tannin to my ciders
 - to emulate the use of bittersweet and bittersharp cider apples
- This was done in the tart cherry cider I shared today
- Oak and fruit skins can also provide tannins

Making Fruit Ciders

- Fruit syrups
 - I prefer Zergut, very natural (fruit juice + sugar)
 - Smart and Final carries a broad range of Torani syrups (less natural)
- Fruit juices
 - Check your local market
- Aging on wine grapes / pomace
 - ~0.5 - 1 gallon or pomace to batch
 - Age for 2-6 weeks
 - Nice tannins and vinous character
- Aging on fruits
 - Dried work well

Making Specialty Ciders

- Spiced Ciders
 - Holiday spiced cider
 - Spiced Perry w/ Trader Joe's Spiced Pear Juice
- Bourbon Oaked Cider
- Other woods and spirits
- Hopped Ciders
- Cysers (Apple + Honey), may not fall under ciders depending on amount of honey
- Stan's Apple Pie Cider
- Edworts Apfelwine
- Use your imagination

Putting it all Together: Tart Cherry Cider Recipe

- Ingredients:
 - 4.5 g apple juice
 - 1/2 tsp Fermaid-K
 - 1/4 tsp DAP
 - 1 tube WLP500 Trappist yeast
 - 1 bottle of Zergut Tart Cherry Syrup
 - 5 campden tablets
 - 4 tsp potassium sorbate

Putting it all Together: Tart Cherry Cider Recipe (2)

- Process:
 - Add first 3 ingredients to fermenter
 - Pitch yeast
 - Oxygenate / aerate / shake carboy
 - Ferment at 75F until done fermenting. Optionally, age until clear.
 - Siphon into keg
 - Add bottle of cherry syrup, campden, and potassium sorbate to keg
 - Purge keg and shake to mix everything in
 - Force carbonate to 2.5 volumes
 - Enjoy!

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 - Judges: Randy Barnes, Cole Davisson, Jenny DuRose, Brett Goldstock, Harold Gulbransen, Joe Kurowski, Greg Lorton, Kara Taylor, Brian Trout, Eric Woltz
 - Steward: Gaaron Varner
- Harold Gulbransen for constructive feedback on my early ciders

Questions?



Photo credit:
Larry Stein

Bourbon Oaked Cider Recipe

- **Ingredients:**
 - 5 gal apple juice
 - 1/2 tsp Fermaid-K + 1/4 tsp DAP
 - 1 tube WLP500 Trappist yeast
 - 2 oz oak chips soaked in enough bourbon to cover them
 - 5 campden tablets + 4 tsp potassium sorbate
- **Process**
 - Brew as normal with apple juice. Ferment all the way out.
 - Pour off and reserve bourbon and add oak chips to fermenter.
 - Age on oak for at least 2 weeks.
 - Keg, stabilize, and backsweeten as usual, adding about half of the reserved bourbon (to taste).

Peach Cider Aged on Apricots Recipe

- **Ingredients:**
 - 4 gal apple juice
 - 1 gal Trader Joe's Dixie Peach juice
 - 1/2 tsp Fermaid-K + 1/4 tsp DAP
 - 1 tube WLP500 Trappist yeast
 - 1.5 lbs dried apricots
 - 5 campden tablets + 4 tsp potassium sorbate
- **Process**
 - Brew as normal with apple juice + 1/2 gal peach
 - After about a week, add apricots
 - Allow to age at least 2 weeks
 - Keg and stabilize as usual, adding 1/2 g peach juice

Cider Aged on Syrah Grapes Recipe

- **Ingredients:**
 - 5 gal apple juice
 - 1/2 gal to 1 gal red grape pomace (skins and seeds)
 - 1/2 tsp Fermaid-K + 1/4 tsp DAP
 - 1 tube WLP500 Trappist yeast
 - 1.5 lbs dried apricots
 - 5 campden tablets + 4 tsp potassium sorbate
- **Process**
 - Brew as normal with 4.5 gal apple juice
 - After about a week, add grape pomace
 - Allow to age at least 2 weeks
 - Keg and stabilize as usual, adding 1/2 gal apple juice