

Mead & Cider Making — Workbook

This workbook turns the course into your own first batches of mead and cider. Each section pairs a hands-on exercise with a fill-in worksheet and a checklist so every gravity reading, nutrient dose, and bottling decision is captured. Work through it batch by batch and keep your completed sheets as a personal recipe log you can repeat and improve.

Foundations, Sanitation, and Gravity Math

Set up clean gear and practice the hydrometer math that drives every later decision.

Exercise: Practice an ABV Calculation

Using the formula $ABV \text{ percent} = (OG \text{ minus } FG) \text{ times } 131.25$, work each scenario by hand, then double-check by writing the gravity drop separately. Do not round the gravity values until the final step.

- A cider goes from OG 1.052 to FG 1.001. What is the gravity drop and the estimated ABV?

- A session mead is bottled at FG 1.004 with an OG of 1.048. What ABV did it reach?

- You want a 6 percent dry mead. Work backwards: what gravity drop, and therefore what OG, do you need?

- Explain in one sentence why a reading taken at 30 C should be corrected before you trust it.

Worksheet: Equipment and Sanitation Readiness

Fill in what you own, what you still need, and your sanitation plan before you buy ingredients. Leave the readiness score blank until you total your owned items yourself.

Fermenter type and size

Airlock and stopper or lid (yes/no)

Hydrometer and test jar (yes/no)

Auto-siphon and tubing (yes/no)

Cleaner on hand (PBW / OxiClean Free / other)

Sanitizer on hand (Star San / other)

Star San dilution you will use (mL per 5 gal)

Items still to buy

Sanitizing readiness score out of 6 (count your yes answers)

Checklist: Pre-Brew Sanitation Routine

- Clean all gear with PBW or OxiClean Free and rinse
- Mix Star San at 1 oz (30 mL) per 5 gallons of water
- Sanitize fermenter, lid, airlock, stopper, spoon, and hydrometer jar
- Fill the airlock with sanitizer or vodka
- Confirm water is dechlorinated (rested overnight, boiled, or campden-treated)
- Set up a separate clean tray so sanitized gear stays apart from raw ingredients

Mead: Honey Ratios, Yeast, and Nutrient Staggering

Design a mead by gravity, choose a yeast, and lay out a staggered nutrient schedule.

Exercise: Build a Recipe from a Target ABV

Pick whether you are making a session mead (5 to 7 percent) or a strong traditional mead (12 to 14 percent), then size the honey using 35 points per pound per gallon. Show each step.

- State your target ABV and convert it to a target gravity drop (ABV divided by 131.25).

- Convert that drop to a target OG for a dry finish, then to pounds of honey per gallon (OG drop divided by 0.035).

- For a 1 gallon batch, how many pounds of honey do you add before topping up to volume?

- Why must you top up to final volume before taking your OG reading?

Worksheet: Yeast Selection Sheet

Choose one strain by matching its traits to your batch. Record the reasoning so you can compare results later.

Chosen strain (e.g. EC-1118 / 71B / D47)

Listed alcohol tolerance (percent)

Listed temperature range (C)

Your fermentation room temperature (C)

Expected flavor character (neutral / fruity / floral)

Rehydration water amount and temperature

Rehydration nutrient used (Go-Ferm / none)

Reason this strain fits your target ABV and room temp

Worksheet: TOSNA 3.0 Nutrient Schedule Planner

Enter your batch volume and OG, run them through a TOSNA 3.0 calculator (such as the MeadMakr tool), then record the per-addition Fermaid O weight. Calculate the one-third sugar break gravity yourself and leave it blank until you do.

Batch volume (gallons or liters)

Original gravity (OG)

Total Fermaid O for the batch (g, from calculator)

Addition 1 at 24 h amount (g)

Addition 2 at 48 h amount (g)

Addition 3 at 72 h amount (g)

Addition 4 at 1/3 sugar break amount (g)

One-third sugar break gravity (calculate: OG minus one third of the OG-to-1.000 drop)

Checklist: Mead Primary Fermentation

- Dissolve honey fully and top up to final volume before reading OG
- Record OG and the date
- Rehydrate yeast at about 40 C and pitch within the strain's temperature range
- Add nutrient doses at 24, 48, and 72 hours
- Add the final nutrient dose at the one-third sugar break
- Degas by gentle stirring daily for the first week
- Stop nutrient additions once past the one-third sugar break

Cider: Juice, Yeast Choices, and Wild Fermentation

Source juice, decide pitched versus wild, and run primary fermentation to a stable gravity.

Exercise: Juice Label and Method Decision

Inspect a real apple juice or cider source and decide your fermentation approach based on what you find.

- List the exact ingredients on the label. Does it contain potassium sorbate or sodium benzoate? Is it safe to ferment?

-
- Is the juice pasteurized or raw? Which fermentation methods (pitched, wild, hybrid) are possible for it and why?

-
- If the OG is only 1.045 and you want about 8 percent ABV, how would you raise the gravity and roughly by how much?

-
- Would you add tannin or acid to this juice? Justify your choice in one sentence.
-

Worksheet: Pitched vs Wild Decision Worksheet

Weigh the trade-offs for this specific batch, then commit to a method. Leave the final recommendation blank until you have filled the rows above it.

Juice type (store pasteurized / fresh raw press)

Risk tolerance for this batch (low / medium / high)

Desired flavor (clean and predictable / complex and terroir-driven)

Time available before you want to drink it

Campden pre-treatment for wild or hybrid (yes/no, hours to wait)

Backup cultured strain if wild stalls

Your chosen method and the single biggest reason for it

Checklist: Cider Primary Fermentation

- Confirm juice contains no sorbate or benzoate preservative
- Record OG before pitching
- Optionally add tannin (wine tannin or strong tea) and adjust acid
- Pitch chosen yeast within 15 to 22 C, or proceed wild with raw juice
- Confirm airlock activity within 48 hours; re-pitch if nothing happens
- Keep the fermenter sealed and out of direct sunlight
- Rack off the lees once gravity is stable for three days

Stabilizing, Backsweetening, Carbonation, and Packaging

Finish the batch: stop fermentation, set sweetness, carbonate safely, and bottle.

Exercise: Backsweetening by Bench Trial

Practice the small-sample method so you never oversweeten a full batch. Use a measured sample and scale the winning ratio up by hand.

- Why must you stabilize with sorbate and metabisulfite before adding any sweetener?

- You sweeten a 100 mL sample with 3 g of honey and like it. How much honey would a 4 liter batch need at the same ratio? Show your scaling.

- Which final-gravity range are you targeting (dry 1.000, off-dry 1.005, semi-sweet 1.010 to 1.015, sweet above 1.020) and why?

- Explain why a stabilized, backsweetened batch cannot be carbonated with priming sugar.

Worksheet: Carbonation and Priming Plan

Decide your carbonation route and, if priming, record the sugar weight. Leave any calculated total grams blank until you compute it for your exact batch volume.

Carbonation choice (still / bottle-conditioned / forced CO2)

Confirmed stable final gravity before priming (FG, three-day check)

Batch volume to prime (liters)

Target fizz level (light / moderate / champagne)

Priming sugar rate you will use (g per liter)

Bottle type rated for pressure (heavy beer / swing-top)

Total priming sugar for the batch (calculate: rate times liters)

Conditioning location and start date

Checklist: Stabilize, Sweeten, and Bottle

- Confirm fermentation is finished with a stable three-day gravity
- Add metabisulfite (campden) and potassium sorbate, then wait 24 hours
- Run a small-sample bench trial and scale the winning sweetness to the batch
- If carbonating naturally, weigh priming sugar precisely and mix evenly
- Sanitize bottles and caps and siphon gently to avoid oxygen pickup
- Label every bottle with recipe name, OG, FG, and date
- Store carbonating bottles in a tub or box during conditioning as a safety measure

Your Action Plan

1. Assemble and sanitize your kit, then mix Star San at the correct dilution.
2. Choose your first project: a 5 to 7 percent session mead or a store-juice cider for the lowest risk.
3. Calculate honey or sugar to hit your target OG, then measure and record the actual OG.
4. Select a yeast strain matched to your room temperature and target ABV, and rehydrate it correctly.
5. Pitch, then run the TOSNA nutrient schedule for mead or confirm activity within 48 hours for cider.
6. Ferment to a stable final gravity confirmed over three consecutive days.
7. Rack off the lees and let the batch clear before any packaging decision.
8. Decide still, naturally carbonated, or stabilized-and-sweet, and stabilize first if sweetening.
9. Carbonate by precisely weighed priming sugar or forced CO₂ using pressure-rated bottles.
10. Bottle, label with OG, FG, and date, age appropriately, and review your batch log to plan the next one.

