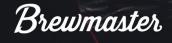
NORCAL PALE



NORCAL PALE West Coast Pale Ale

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EXTRACT & MALTS

- 8 lbs Ultralight Malt Extract
- 12 oz Crystal 60°L

YEAST & ADDITIONS

- Clarifier: Boil last 5 min
- CellarScience[™] CALI Dry Yeast

HOPS

Boil 60 Min: • 0.5 oz Magnum Boil Last 30 Min: • 1 oz Perle Boil Last 1 Min: • 2 oz Cascade Dry Hop for 3 to 5 days: • 1 oz Cascade CUT ME OUT FOR BISHOP TAP HANDLE



RECIPE TIPS

We suggest a fermentation temperature close to 68°F. Add dry hops when fermentation is complete. Allow 3-5 days of contact time before packaging.

STATS • OG: 1.053 • SRM: 9 • IBU's: 43 • ABV: 5.4%

Necessary Equipment and Supplies:

- **Kettle:** Large enough to boil at least 3 gallons. A 5 gallon kettle will work for partial boil but ideally an 8 to 10 gallon kettle for full boil.
- Fermenter: To hold 5.5 gallons of wort with at least 1 gallon of head space or more.
- Brewing Cleaner and sanitizer

Recommended Equipment and Supplies:

Spoon · Airlock & Stopper · Hydrometer · Thermometer · Funnel

PART 1 – Boiling the Wort (Sugar Water)

- 1. Make sure to clean and sanitize all equipment that may come in contact with the beer.
- Start by putting at least 2-3 gallons of water in the kettle and turn on the heat to high, this is a partial boil. **TIP:** Doing a full boil is ideal but requires a kettle large enough to end up with 5.5 gallons after your 60 minute boil.
- 3. Add the grains into the included mesh bag(s). Make sure the grains cannot come out and place the bag in the water inside the kettle. If the kit does not come with grains skip to #6.
- 4. You will be steeping the grains in the water as it heats for about 30 minutes. If the temperature gets close to 170°F before 30 minutes, turn the heat down until 30 minutes has elapsed.
- 5. Once 30 minutes has passed, remove the grain bag and continue to heat the water to a boil.
- 6. Once at a boil, turn off the heat and stir in your malt extract. Be sure to mix well to prevent burning on the bottom.
- 7. Turn the heat back on and bring the wort to a boil.

TIP: Stay near your kettle! When your wort begins to boil, you will notice foam starting to rise. You need to be there to turn down the heat. When the foam drops, reapply heat and proceed to boil.

- 8. Once at a nice steady rolling boil, start your boil timer for 60 minutes.
- 9. Add your first hop addition according to your recipe. Most recipes have the first hop addition at the beginning of the 60 minute boil, but your recipe may have the first hop addition come later. You can add the hops in a mesh filter bag, or add directly to the kettle.
- 10. Check your specific recipe to see when the other hop additions are, and set a reminder.
- 11. Ensure that your fermenter and any items that may come in contact with the beer are cleaned and sanitized.
- 12. Continue adding hops according to the times in the recipe.
- 13. If using a wort chiller, make sure to add it to the kettle with 15 minutes left in the boil.
- 14. If your recipe includes a clarifier/fining agent, add when there are 5 minutes left in the boil.

PART 2 – Cooling and Transferring

- 15. At the end of 60 minutes turn off the heat.
- 16. You will need to cool your wort to around 70°F before adding to your fermenter.
 - A. Partial Boil Option: If less than 5 gallons, place the lid on the kettle and carefully move the kettle to a water and ice bath. Wait until the temperature is close to 70°F.

- B. **Full Boil Option:** For 5 gallons or more, use a wort chiller to cool to around 70°F.
- 17. Remove any hop bags, if used.
- Once the wort is cooled down to around 70°F, you are ready to pour or siphon the wort into your fermenter. Try to avoid transferring any of the heavy sediment.
- 19. Once all of the wort is in the fermenter, check your volume and if needed add enough clean water to bring your volume up to 5.5 gallons.
- 20. Carefully swirl the fermenter to aerate and mix the wort.
- 21. If you have a hydrometer, take your first specific gravity reading and write it down. This is your "original gravity".

PART 3 – Fermentation and Packaging

- 22. Follow any preparation instructions on the yeast package, and add the yeast to the fermenter. Attach your liquid filled airlock to the fermenter.
- 23. Leave the fermenter in a consistently cool (between 65 –70°F is ideal) dark spot for fermentation.
- 24. Fermentation usually takes around 14 days. You will start to see activity within 24–48 hours. It will take about 7 days to ferment and 7 days to settle and condition.
- 25. Your beer is ready for bottling or kegging after fermentation. This means near the expected "final gravity" with no change in specific gravity readings taken 2 days apart.
- 26. If using a hydrometer write down your final gravity reading.
- 27. Make sure you clean and sanitize all items during bottling or kegging.
- 28. If bottling, transfer your beer into a bottling bucket. Boil your priming sugar in 2 cups of water for 3-5 minutes. Let it cool, and add to the bottling bucket. Mix gently without splashing. Fill and cap each bottle.
- 29. Place the bottles in a cool, dark spot ideally between 65-70 °F. It will take an additional 14 days in the bottles to carbonate.
- 30. If kegging, transfer your beer into the keg and seal. Connect the CO_2 , set at the right temperature and pressure until it has achieved the desired carbonation.
- 31. Enjoy!



GALLONS IN FERMENTER
ORIGINAL GRAVITY
TEMP OF WORT AT PITCH
LAG TIME
FERMENTATION TEMP
DAYS IN FERMENTER
FINAL GRAVITY
YEAST STRAIN