

King's Red Rye IPA - #150

Description

Based on #148, #143, #139, #135, #127, similar to [Denny Conn's Rye IPA](#), with dry Safale US-05 yeast. Makes ~11 gal, 109 IBU (calculated), 7.6% (v/v) alcohol, and 235 calories in 12 oz. Pete Kirkgasser makes a great hoppy Red Ale.

Brew (Brew day takes ~8hr, see page 2 for mashing details)

- 1) Yeast, 4 packs Safale US-05, rehydrate*
- 2) **Treat Mash Water**, 27 gal H₂O day before. Add 1 Campden tablet /20 gal. the night before (1.5 tablets in 14 gal. brew pot, 6 & 7 gal. buckets.) 9 gm. Gypsum, CaSO₄) & 3 gm. Epsom Salts, MgSO₄, into mash at dough in, for 10.3 gal. 9.9 & 3.3 gm. incl. Mash-Out, 11.3 gal. Sparge. Should both be (14.5 gal. in brew pot), See [Palmers-Water-Calc-IPA.xlsx](#), & [EZ_water_calculator-3.0.2-RRIPA.xls](#) with 3% Acidulated malt per John Bl. (½ each). 104 ppm Ca, 17 ppm Mg, 159 ppm SO₄, 60 ppm Cl, 35 ppm Na, SO₄/Cl = 2.65. 12 gal. in brew pot night before.
- 3) **Grain Bill** 33 lb total grain, assumed 74% extraction efficiency for 1.068, after sugar added)

22 lb. Marty 2 Row	18 oz. Acidulated (3.4%)	7 lb. Rye Malt
1 lb. Munich I (6L)	1 lb. Cara Red (20L)	½ lb. Melanoidin (25L)
6 oz. Roasted Barley	3 lb. Cane Sugar	\$43 grain
- 4) **Mash-In** – 1x infusion, 146-151°F, use 1.25 qt./lb., heat to 171°F for 10.3 gal of 161°F strike, hold 50 min. (this one was 171°F made a 161°F strike, so added no near boiling, got 147 to 146°F, no hot H₂O, for total of 73 min. mash). pH = 5.25, 32 min. into mash (5.4 expected).
- 5) **Mash-Out** - Add 5 gal. of near boiling, actual 2 gal., got 146°F, re-circulate 6 min. Collect 14.5 gal. **Target = 1.061**, should get S.G = **1.052 before boil** (+8 pt. for 2 lb. sugar, -1 pt for yeast). I got 1.050 which should boil to 1.061, ended up O.G. = 1.057, 4 pt Low, so added 3 lb. cane sugar (+ 11.5 pt.), to get 1.068. pH = 5.35 into brew pot.
- 6) **Boil Adds** (76 min. total boil of full volume, should end up at 6 gal.). Hops not in bags.

4 oz. Magnum pellets (9.1%)	65 min. boil left
2 oz. CTZ, whole (10.4%)	65 min. boil left
2 teaspoon Irish Moss & 1 Zn tablet & 6 tsp YN	17 min. boil left
Put wort cooler in *** Get whirlpool set up ***	12 min. boil left
3oz. HG Cascade, whole (~2.5%, 2014)	2 min. boil left
- 7) **Whirlpool for** 36 min., after 4 min. delay, total of 76 min. to cool wort (immersion chiller w/ice) to 69°F
- 8) **Transfer** to 2 ea., 6.5 gal. carboy, 2 min. vigorous pure O₂, add blow-off. pH = 5.35 (5.4 expected.)
- 9) **Pitch yeast** (not foamy, use 8"x8" Pyrex pan to rehydrate 4 packs US-05).

Fermentation

- 1) 20 days in **primary** @63-66°F for 14 days in Brewery, with thermostat and heater, no gradual to 70°F for 0 day. 6 days in added 3 lb. sugar, then heat off, 5 days at 60°F.
- 2) **Kegged** 1/21/16 (2.0 hr), dry hop with 2 oz whole Citra & 2 oz. whole Centennial in 2ea. 4.5 gal keg, Set for 4 days in Brewery, & hops out, Denny used 1 oz. Columbus for dry hopping. Got 9.5 gal. pH = 4.5
- 3) 1.068 to 1.013 is 81% apparent attenuation, high attenuation.

Results



Brewed 1/1/16, got 83% grain extraction. 1st Centennial & Citra dry hopped, _____ aroma, _____ bitterness, _____ red rye flavor & body, _____ sweetness. _____ color and clarity after ___ weeks. John Bleichert liked #143, won [Gold](#) in March 2015 Coconut Cup, [37.5 in Specialty class, 23](#).

*Rehydrate Dry Yeast

Per John Palmer pg 72. Warm **11.5 gm.** yeast pack to RT. Prepare **115 ml** of sterile H₂O at **105°F**. Sprinkle yeast onto H₂O surface, wait **15 min.** Stir into a cream, wait **15 min., should foam up.** Adjust temperature to within **15°F** of wort, pitch.