

King's Red Rye IPA - #151

Description

Based on [#150](#), [#148](#), [#143](#), [#139](#), [#135](#), [#127](#), similar to [Denny Conn's Rye IPA](#), with dry Safale US-05 yeast. Makes ~11 gal, 103 IBU (calculated), but 10 min. whirlpool & 18 min. delay. 7.4% (v/v) alcohol, and 225 calories in 12 oz. Pete Kirkgasser makes a great hoppy Red Ale. See [Amahl's Ruthless Rye Clone](#).

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

- 1) Yeast, 4 packs Safale US-05, rehydrate*
- 2) **Treat Mash Water**, 26 gal H₂O day before. Add 1 Campden tablet /20 gal. the night before (1.5 tablets in 12 gal. brew pot, 7 & 7 gal. buckets.) 9 gm. Gypsum, CaSO₄ & 3 gm. Epsom Salts, MgSO₄, into mash at dough in, for 9.8 gal. 9.5 & 3.2 gm. incl. Mash-Out, 10.3 gal. Sparge. Use 13 gal. in HLT for Sparge, add 6 gal. to Mash Tun for 2nd runnings. See [Palmer's-Water-Calc-IPA.xlsx](#), & [EZ water calculator-3.0.2-RRIPA.xls](#) with 3% Acidulated malt per John Bl. (½ each). 107 ppm Ca, 18 ppm Mg, 167 ppm SO₄, 60 ppm Cl, 35 ppm Na, SO₄/Cl = 2.78. Oops, forgot Sparge Salts, so added ½ of them to brew kettle.
- 3) **Grain Bill** 31.5 lb. total grain, assumed 76% extraction efficiency for 1.065, after sugar added, got 77%)

23 lb. Marty 2 Row	17 oz. Acidulated (3.4%)	6 lb. Rye Malt (19%)
0 lb. Munich I (6L)	1 lb. Cara Red (20L)	0 lb. Melanoidin (25L)
6 oz. Roasted Barley	1.5 lb. Cane Sugar (4.6%)	\$40 grain
- 4) **Mash-In** – 1x infusion, 146-151°F, use 1.25 qt./lb., heat to 171°F for 9.8 gal of 161°F strike, hold 50 min. (this one was 174°F made a 168°F strike, so added 2 qt. RT, got 147 to 146°F, for total of 2 hr 28 min. mash, since 1.75 gal. mash-out). pH = 5.3, 28 min. into mash (5.4 expected). Clear in <38 min.,
- 5) **Mash-Out** - Add to 16 gal. mark, with near boiling, actual 1.7 gal., got 151°F, re-circ. 6 min. drain, refill with 6 gal., stir, Vorlauf, drain. 2nd vol. is 14.5 gal. - first vol.. Collect 14.5 gal. 6 gal. refill was perfect. **Target = 1.065**, should get S.G = **1.048 before boil** (+8 pt. for 2 lb. sugar, -1 pt for yeast). I got 1.053 which should boil to 1.063, ended up O.G. = 1.059, 2 pt high, so add 1.5 lb. cane sugar (+ 6 pt.), ¾ lb. = 12 oz./each carboy, when fermentation slows, to get 1.065. pH = 5.3 into brew pot.
- 6) **Boil Adds** (76 min. total boil of full volume, should end up at 11 gal.). Hops not in bags.

3.5 oz. Chinook pellets (10.8%)	***slowly! no boil over***	42 min. boil left
2 oz. CTZ, pellets (14%)		42 min. boil left
Rehydrate yeast, clean out Mash Tun		
2 teaspoon Irish Moss & 1 Zn tablet & 6 tsp YN		17 min. boil left
*** Set up whirlpool, HopRocket, & Therminator ***		
2oz. Lemondrop, whole (4.5%)	Should be 5 min.	2 min. boil left
- 7) **Hop Back**, load with 3 oz. Centennial, whole (10.4%)
- 8) **Whirlpool for** 10 min., then gravity feed **Counterflow, Cool** wort to 66°F, into 2 ea., 6.5 gal. carboys. Oops, 11 min. whirlpool and 18 min. delay for forgotten yeast rehydration. Extra bitter?
- 9) **Oxygenate**, 1.5 min. 0.7 l/min. pure O₂, ea. carboy, add blow-offs. pH = 5.3 (5.4 expected.)
- 10) **Pitch yeast**, very foamy, use 2 long bread baking dishes to rehydrate 4 packs US-05, 2 ea.

Fermentation

- 1) 22 days in **primary** @66-68°F for 9 days in Fermentation Chamber (1st use), with thermostat and heater, raised to 70°F for 5 day. 5 days in added 3 lb. sugar, then heat off, 8 days at 55°F.
- 2) **Kegged** 5/6/16 (2.0 hr), dry hop with 2 oz whole Citra & 2 oz. whole Centennial in 2ea. 4.5 gal keg, Set for 7 days in Brewery, fridge for 3 days & hops out. Got 9.5gal. pH = ____
- 3) 1.065 to 1.011 is 83% apparent attenuation, very good attenuation, low I.G., sugar, lots of healthy yeast.

Results



Brewed 4/15/16, got 77% grain extraction. 1st Centennial & Citra dry hopped, good aroma, good bitterness, good red rye flavor & body, good low sweetness, 2x lost CO₂ due to keg leak, lost aroma. Not too red in color and good clarity after a few weeks. John Bleichert liked #143, won [Gold](#) in March 2015 Coconut Cup, [37.5 in Specialty class, 23](#). Didn't place in 20 beer HB contest in Vero Beach or NHC 2016, Etienne says [#150](#) was too sweet, so drop the Munich & Melanoidin & cut the OG 3 points. This one OK, but intense flavors.

*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.