

MK Brown Rye IPA - #144

Description [See Brew.XLS](#)

Brewed with Jay Martin in St. Lucie, FL. Based on [#143](#), [#139](#), [#135](#), [#127](#), similar to [Denny Conn's Rye IPA](#), with dry Safale US-04 British Ale yeast, not the usual US-05. Makes ~10 gal, 98 IBU (calculated), 7.2% (v/v) alcohol, and 235 calories in 12 oz. See next try, #xxx

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

- 1) Yeast, 4 packs Safale US-04, rehydrate*
- 2) **Treat Mash Water**, Initially, 5.8 gal., use 2.9 gal. Jay's C filtered town H₂O, 2.9 gal. distilled, plus 4 gm. Gypsum (CaSO₄), 2.8 gm. Epsom Salts (MgSO₄), 0.7 gm Baking Soda (NaHCO₃) & 2 gm. Chalk (CaCO₃) in-to mash at dough in, for 5.8 gal. See BeerSmith & [Palmer XLS](#). 102 ppm Ca, 13 ppm Mg, 163 ppm SO₄, 70 ppm Cl, 52 ppm Na, SO₄/Cl = 2.3. Plus 12 gal., ½ distilled H₂O for sparge & fill up to 14 gal. pre-boil. Use 2x mineral adds for it. Mehmet was right, chalk doesn't dissolve much.
- 3) **Grain Bill** (18.6 lb total grain, assumed 76% extraction efficiency for 1.070, after sugar added)

10.75 lb. Pale Ale	0 lb. Acidulated (0%)	2 lb. Munich (10L)
1 lb. Cara Brown (55L)	½ lb. Melanoidin (25L)	4 lb. Rye Malt
6 oz. Roasted Barley	3 lb. LDME	0 lb. Cane Sugar

\$35 grain
- 4) **Mash-In** – 1x infusion, 146-151°F, use 1.25 qt./lb., heat to ~165°F for 5.75 gal of ~160°F strike, hold 75 min. We did 3x batch sparge, poor vorlauf,
- 5) **Mash-Out** - Add ~2 gal. of near boiling. Got ~165°F, re-circulate by pot fulls. Collect 12 gal. **Target = 1.063 in fermenter**, got 1.070, bottom sludge, so ~1.068.
- 6) **Boil Adds** (68 min. total boil of full volume, should end up at 10.5 gal.). Hops not in bags.

4 oz. CTZ, pellets (11.5%)	65 min. boil left
1 oz. Chinook, pellets (13.9%)	20 min. boil left
2 teaspoon Irish Moss & 0 Zn tablet & 5 tsp YN	17 min. boil left
Put wort cooler in *** Get whirlpool set up ***	15 min. boil left
2oz. Citra, pellets (13.3%)	3 min. boil left
- 7) **Whirlpool for** 10 min., then 34 min. to cool wort (sump pump thru immersion chiller w/ice) to 57°F
- 8) **Transfer** to 2ea. 6 gal. carboys, 2 min. vigorous pure O₂. ea., add bubblers.
- 9) **Pitch yeast** (very foamy). Put into Jay's garage fridge, set ~65°F.

Fermentation

- 1) ~17 days in **primary** fridge @65°F at Jay's, probably not finished warm enough to finish well.
- 2) **Kegged** 3/17/15, dry hop with 1.8 oz whole Citra & 1 oz. Au Stella pellets in 4.5 gal keg, Set for 4 days, then hops out. Jay later kegged his, it was dry hopped in the fermenter, when we kegged mine.
- 3) 1.068, but later 1.054, due to H₂O add, to 1.015 is 72% apparent attenuation, poor.

Results

Brewed 2/22/15, got 95% grain extraction, due to 3 lb. LDME, 1.8 oz. whole Citra & 1 oz. pellet Au Stella dry hopped for 4 days, good aroma, firm bitterness, good brown rye flavor & body, slight sweetness, until H₂O add, then light, "Session IPA."

*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.