

No-Sparge Helles Export

STATS

Boil Time: 90 min
Batch Size: 6 gallons
Boil Size: 8.25 gallons
Boil Gravity: 1.038
Efficiency: 70% (brew house)
Original Gravity: 1.054
Final Gravity: 1.012
ABV (standard): 5.5%
IBU: 18.28
SRM: 3.31
Mash pH: 5.2
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INGREDIENTS

12 lb - Pilsner (100%)
0.4 oz - Magnum Pellet (12.9%) @ 60 min

YEAST

Imperial L17 Harvest - Approx 400B cells from decanted starter

WATER ADJUSTMENTS & PROFILE

0.5 tsp - Calcium Chloride
0.5 tsp - Epsom Salt
1.75 tsp - Lactic acid

Ca2: 26 Mg2: 6 Na: 0 Cl: 43 SO4: 24

To scavenge dissolved oxygen, all liquor was heated to 85 F and dosed with 2 tsp active dry bread yeast and 4 tsp DME for 120 mins before heating to mash-in temperature.*

MASH GUIDELINES

- 148* F x 30 min, Amount: 10 gal
- 162* F x 60 min
- Pump recirculation during last 20 mins of 162* rest to set filter bed

FERMENTATION/PACKAGING

- Pitched at 50* F
- 7 days @ 54* F in Anvil Brew Bucket
- Confirmed FG then keg'd w/ 1qt speise to prime
- 4 day D-rest @ 62* F in keg
- Confirmed carbonation and no diacetyl, then ramped down to 34* over 5 days
- All batches lagered at 34* F for 40-48 days depending upon brew date