

Ragnarok - 5.4%

International Amber Lager

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Type: All Grain

IBU	: 26 (Tinseth)
BU/GU	: 0.48
Colour	: 18 EBC
Carbonation	: 2.5 CO ₂ -vol

Pre-Boil Gravity	: 1.041
Original Gravity	: 1.054
Final Gravity	: 1.013

Fermentables (1.47 kg)

1.467 kg - Floor-Malted Bohemian Dark Malt 16...

Hops (16 g)

First Wort 60 - 7.6 g - Brewer's Gold (T90) - ...
 ^ The Malt Miller (UK) HOP-06-011
 15 min - 8.4 g - Hallertauer Mittelfrueh (T90...
 ^ The Malt Miller (UK) HOP-06-008

Miscellaneous

Mash - 0.17 g - Baking Soda (NaHCO₃)
 ^ Lot # 41190621/3
 ^ Brouwstore (NL) 003.106.2
 Mash - 2.14 g - Calcium Chloride (CaCl₂) 33 %...
 ^ Lot # 115038
 ^ Brouwstore (NL) 055.035.0
 Mash - 0.16 g - Canning Salt (NaCl)
 ^ Albert Heijn (NL)
 Mash - 0.28 g - Epsom Salt (MgSO₄)
 ^ Lot # /2119000091
 ^ Brouwstore (NL) 055.027.7
 Mash - 0.64 g - Gypsum (CaSO₄)
 ^ The Malt Miller (UK) CHE-03-004
 Mash - 0.1 ml - Lactic Acid 80% 80%
 ^ Lot # 20200213
 ^ Brouwstore (NL) 003.002.3
 15 min - Boil - 0.28 items - Protafloc

Yeast

0.3 pkg - White Labs German Lager X WLP835

01 Brouwpoint 5L (60min) (rev 4)

Batch Size	: 5.6 L
Boil Size	: 7.76 L
Post-Boil Vol	: 5.96 L



18 EBC

Mash Water	: 4.4 L
Sparge Water	: 4.89 L
Boil Time	: 60 min
Total Water	: 9.29 L

Brewhouse Efficiency: 71.8%

Mash Efficiency: 73.3%

Mash Profile

01 One Step Mash (60 min)
 71 °C - Strike Temp
 65 °C - 60 min - Temperature

Fermentation Profile

20 Lager (Standard)
 12 °C - 14 days - Primary

Water Profile

02 NL Spa Reine Flat Mineral Water (www.ah.nl...
 Ca 48 Mg 5 Na 15 Cl 64 SO 54 HCO 30

SO/Cl ratio: 0.9
 Mash pH: 5.4
 Sparge pH: 6

Measurements

Mash pH:

Boil Volume:

Pre-Boil Gravity:

Post-Boil Kettle Volume:

Original Gravity:

Fermenter Top-Up:

Fermenter Volume:

Final Gravity:

Bottling Volume:

Recipe Notes

target: IBU = 30, OG = 1.054, FG = 1.010.

Reduce -HCO₃ to around 40 ppm.