

# Helles

Brewhouse Efficiency75%

Batch Size:6.00 Gal

Starting Boil Size:7.33 Gal

Style:Munich Helles

Method:All Grain

Boil Time:60.0 Min

Recipe Date:2/20/22

Ozarks Mountain Brew

Head Brewer:

Oz

Original Gravity1.057

Final Gravity1.013

Boil Gravity1.047

Abv5.79%

IBU39.96

Color6.48°L

PH5.40

Fermentables	13.00 lbs	Amount	Bill	PPG	Color L	Mash Time
BE - Pale Ale		7.00 lb	58.3%	38	3.0°L	
BE - Munich		5.00 lb	41.7%	38	6.0°L	
Rice Hulls		1.00 lb				

Brew Steps	9.20 Gal	Temp	Description	Time
Add strike water		156.0 °F	add infusion water and heat to 157	60.0 Min
Recirculation	6.5 Gal	152.0 °F	add grain to basket and submerge then stir	60.0 Min
Mash out		170.0 °F	stir then raise temp to 170	15.0 Min
Sparge	2.7 Gal	170.0 °F	lift basket and add water sparge to 7 gallons	10.0 Min
Fly sparge		170.0 °F	recirculate after sparging	30.0 Min

Hops	Amount	IBU	Type	Use	Temp	Time
Chinook	0.75 oz	37.30	Pellet	Boil		60.0 Min
Fuggles	1.00 oz	2.66	Pellet	Boil		5.0 Min

Salts	Amount	Use	Time	Amount	Use	Time
Gypsum	6.0 g	Strike				
Calc. Chloride	5.0 g	Strike				
Canning/Sea Salt	2.0 g	Strike				
88% Lactic Acid	4.00 ml	Strike		2.5 ml	Sparge	

Others	Amount	Use	Description	Time
Campden tablet	1.0 Each	Strike Water	Add to strike water	5.0 Min
Whirlfloc tablet	1.0 Each	Boil	Add to boil	15.0 Min
Yeast Nutrient	1.0 Tsp	Primary	Add to boil	5.0 Min
Gelatin	1.0 Tsp	Keg	add while carbing	

Yeast	Lab	ID/Name	Optimum Temp	Floculation	Attenuation	QTY
	Fermentis	W-34/70 - German Lager	48 °F to 72 °F	High	83%	

Water	Calcium (Ca+2)	Magnesium (MG+2)	Sodium (NA+)	Chloride (CI)	Sulfate (SO4-2)	Mash PH	Sparge PH
Balanced	125.8	20.0	27.6	125.9	101.2	5.40	5.40