

Hoppy Pale Ale

Brewhouse Efficiency80%

Batch Size:13.00 Gal

Starting Boil Size:16.92 Gal

Style:American Pale Ale

Method:All Grain

Boil Time:60.0 Min

Recipe Date:4/2/24

Ozarks Mountain Brew

Head Brewer:Oz

Original Gravity1.051

Final Gravity1.013

Boil Gravity1.039

Abv5.01%

IBU37.48

Color8.06°L

PH5.52

Fermentables	22.00 lbs	Amount	Bill	PPG	Color L	Mash Time
UK - Maris Otter Pale		17.00 lb	77.3%	38	4.0°L	
BE - Munich		4.00 lb	18.2%	38	6.0°L	
USA - Caramel / Crystal 60L		1.00 lb	4.5%	34	60.0°L	

Brew Steps	21.35 Gal	Temp	Description	Time
Mash Infusion		159.6 °F	add 11.0 Gal strike water at 160 °F	60.0 Min
Recirculation	11.0 Gal	153.0 °F	add grain to basket lower to 153 °F	60.0 Min
Mash out		168.0 °F	stir then raise temp to 168 °F	15.0 Min
Sparge	10.4 Gal	168.0 °F	lift basket add 10.35 Gal of sparge water	10.0 Min

Hops	Amount	IBU	Type	Use	Temp	Time
Cascade	4.00 oz	27.54	Pellet	Boil		30.0 Min
Galaxy	8.00 oz	5.61	Pellet	Hop Back		30.0 Min
Citra	8.00 oz	4.33	Pellet	Hop Back		30.0 Min

Salts	Amount	Use	Time	Amount	Use	Time
Gypsum	10.0 g					
85% Phosphoric	5.00 ml			5.7 ml		

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
	CellarScience	CALI	59 °F to 72 °F	Medium	80%	

Water	Calcium (Ca+2)	Magnesium (MG+2)	Sodium (NA+)	Chloride (Cl)	Sulfate (SO4-2)	Mash PH	Sparge PH
Very Bitter	64.0	25.0	5.0	3.0	74.0	5.52	6.00