

Ozarks Pale Ale

Recipe Date:

Brewhouse Efficiency	85%	Style:	American Pale Ale	Ozarks Mountain Brew
Batch Size:	12.00 Gal	Method:	All Grain	Head Brewer:
Starting Boil Size:	14.66 Gal	Boil Time:	60.0 Min	Oz

Original Gravity	Final Gravity	Boil Gravity	Abv	IBU	Color	PH
1.051	1.013	1.042	5.05%	70.51	7.73°L	5.39

Fermentables	19.50 lbs	Amount	Bill	PPG	Color L	Mash Time
USA - Pale Ale		18.00 lb	92.3%	37	4.0°L	
USA - Caramel / Crystal 40L		1.50 lb	7.7%	34	40.0°L	

Brew Steps	19.71 Gal	Temp	Description	Time
Mash Infusion	8.0 Gal	163.9 °F	fill hlt with water, add campden	10.0 Min
Recirculation		154.0 °F	transfer strike water to mash tun, stir	60.0 Min
Mash out		170.0 °F	raise temp to mashout	15.0 Min
Fly sparge	11.7 Gal	168.0 °F	set valves and fly sparge slowly	60.0 Min
Boil		209.0 °F	take sample add hops and boil	60.0 Min
Whirlpool		170.0 °F	add hops and whirlpool	30.0 Min
Rest			let trub and hops settle into trub catcher	20.0 Min

Hops	Amount	IBU	Type	Use	Temp	Time
Perle	2.00 oz	18.43	Pellet	FWH	150.0 °F	90.0 Min
Cascade	2.00 oz	25.94	Pellet	Boil	209.0 °F	60.0 Min
Cascade	2.00 oz	15.93	Pellet	Boil	209.0 °F	30.0 Min
Cascade	6.00 oz	5.73	Pellet	Whirlpool	170.0 °F	30.0 Min
Perle	4.00 oz	4.48	Pellet	Whirlpool	170.0 °F	30.0 Min

Salts	Amount	Use	Time	Amount	Use	Time
Gypsum	13.0 g	Mash	60.0 Min			
Calc. Chloride	2.0 g	Mash	60.0 Min			
85% Phosphoric	7.00 ml	Mash	60.0 Min	6.2 ml	Sparge	60.0 Min

Others	Amount	Use	Description	Time
Campden tablet	1.0 Each	Strike Water	Add to strike water	90.0 Min
Whirlfloc tablet	1.0 Each	Boil	Add to boil	15.0 Min
Yeast Nutrient	1.0 Tbsp	Boil	Add to boil	15.0 Min

Yeast	Lab	ID/Name	Optimum Temp	Floculation	Attenuation	QTY
Omega Yeast Labs		OYL-061 - Voss Kveik	68 °F to 98 °F	Medium	79%	

Water	Calcium (Ca+2)	Magnesium (MG+2)	Sodium (NA+)	Chloride (Cl)	Sulfate (SO4-2)	Mash PH	Sparge PH
Very Bitter	76.9	7.0	12.0	25.9	109.2	5.39	6.00