

## Pale ale

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- Gravity **11.9 BLG**
- ABV ---
- IBU **57**
- SRM **5.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.9 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**

### Mash step by step

- Heat up **16.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	1.38 kg (25.2%)	85 %	7
Grain	Weyermann - Bohemian Pilsner Malt	2.83 kg (51.7%)	81 %	4
Grain	Munich malt	0.6 kg (11%)	--- %	14
Grain	Briess - 2 Row Carapils Malt	0.26 kg (4.8%)	75 %	3
Grain	Caramel/Crystal Malt - 20L	0.4 kg (7.3%)	75 %	39

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pilgrim	50 g	60 min	10.4 %
Aroma (end of boil)	Liberty	50 g	5 min	4 %
Dry Hop	Liberty	50 g	7 day(s)	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale