

## Pale Ale

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **4.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **27 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **25 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **25 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **27 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt zero	5 kg (100%)	80 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	30 g	60 min	9.2 %
Whirlpool	Lublin (Lubelski)	30 g	0 min	5.6 %

### Yeasts

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