

## Polish pale ale

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **3.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Crisp - Pale Ale Malt	4.5 kg (90%)	80 %	4
Grain	Pszeniczny	0.5 kg (10%)	85 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	13 g	60 min	12.4 %
Boil	vermelho	50 g	5 min	9.1 %
Boil	amora preta	50 g	5 min	7.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis