

# Pale Ale

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **45**
- SRM **14**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (72.7%)	80 %	5
Grain	Strzegom Czekoladowy 400	0.2 kg (3.6%)	68 %	400
Grain	Cara Gold	0.5 kg (9.1%)	75 %	120
Grain	Specjal B 350	0.2 kg (3.6%)	68 %	350
Grain	Wędzony torfem	0.2 kg (3.6%)	82 %	10
Grain	Płatki owsiane	0.4 kg (7.3%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	35 g	60 min	10 %
Boil	Challenger	20 g	30 min	7 %
Aroma (end of boil)	Lublin (Lubelski)	15 g	10 min	4 %
Dry Hop	Lublin (Lubelski)	15 g	2 day(s)	4 %

## Yeasts

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