

# PALE ALE

- Gravity **13.7 BLG**
- ABV ---
- IBU **50**
- SRM **9.9**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

## Steps

- Temp **53 C**, Time **15 min**
- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15.5 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (77.7%)	79 %	6
Grain	Carahell	0.65 kg (12.6%)	77 %	26
Grain	Strzegom Bursztynowy	0.5 kg (9.7%)	70 %	49

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	20 g	60 min	7.2 %
Boil	Citra	10 g	60 min	12.4 %
Aroma (end of boil)	Cascade	10 g	15 min	7.2 %
Aroma (end of boil)	Citra	20 g	15 min	12.4 %

## Yeasts

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