

# Pale Ale #1

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- Gravity **10 BLG**
- ABV **4 %**
- IBU **19**
- SRM **4.4**
- Style **Extra Special/Strong Bitter (English 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 **3.25 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **17 liter(s)**

## Steps

- Temp **62 C**, Time **10 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **13 liter(s)** of strike water to **68.5C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **20 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale	3.8 kg (95%)	79 %	6.5
Grain	carahell	0.2 kg (5%)	74 %	25

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Golding	20 g	55 min	4.8 %
Boil	progress	20 g	15 min	5.2 %
Aroma (end of boil)	Progress	10 g	5 min	5.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
s-04	Ale	Dry	11.5 g	Fermentis