

## Pale ale 3

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **5.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **19.8 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **68 C**, Time **30 min**
- Temp **73 C**, Time **10 min**

### Mash step by step

- Heat up **15.3 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **68C**
- Keep mash **10 min** at **73C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3 kg (66.7%)	80 %	5
Grain	Pszeniczny	0.7 kg (15.6%)	82 %	4
Grain	Monachijski typ II	0.5 kg (11.1%)	79 %	22
Grain	Cookie Viking Malt	0.3 kg (6.7%)	75 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	10 g	50 min	13.5 %
Aroma (end of boil)	Citra	30 g	7 min	13.3 %
Aroma (end of boil)	Amarillo	20 g	5 min	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	200 ml	---

### Extras

Type	Name	Amount	Use for	Time
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Fining	Whirlfloc T	1 g	Boil	5 min
Water Agent	Siarczan magnezu - Sól Epsom	2 g	Mash	70 min