

## Pale Ale 3

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **23**
- SRM **13**
- Style **Belgian Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **27.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **20.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **15.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (77.7%)	80 %	6
Grain	Viking Pale Ale malt	0.5 kg (9.7%)	80 %	50
Grain	Viking Pale Ale malt	0.25 kg (4.9%)	80 %	60
Grain	Płatki pszeniczne	0.3 kg (5.8%)	85 %	3
Grain	Viking Pale Ale malt	0.1 kg (1.9%)	80 %	1000

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	7.4 %
Boil	El Dorado	10 g	15 min	13.2 %
Aroma (end of boil)	El Dorado	10 g	0 min	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's -M15 Empire Ale	Ale	Slant	100 ml	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	10 g	Mash	60 min

Fining	Whirclofor t	1.2 g	Boil	10 min
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