

## Pale ale

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **39**
- SRM **4.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **35.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **30.8 liter(s)**

### Steps

- Temp **64 C**, Time **15 min**
- Temp **73 C**, Time **60 min**
- Temp **78 C**, Time **3 min**

### Mash step by step

- Heat up **23.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **15 min** at **64C**
- Keep mash **60 min** at **73C**
- Keep mash **3 min** at **78C**
- Sparge using **20.4 liter(s)** of **76C** water or to achieve **35.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (62.5%)	70 %	5
Grain	Strzegom Pszeniczny	1 kg (12.5%)	70 %	6
Grain	Carahell	0.3 kg (3.8%)	70 %	26
Grain	Strzegom Pilzneński	1 kg (12.5%)	70 %	4
Grain	Płatki owsiane	0.4 kg (5%)	70 %	3
Sugar	Glukoza	0.3 kg (3.8%)	100 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	10 g	60 min	12 %
Boil	Columbus/Tomahawk/Zeus	20 g	40 min	15.5 %
Aroma (end of boil)	Citra	20 g	5 min	12 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	20 g	5 min	15.5 %
Dry Hop	Cascade	25 g	3 day(s)	6 %
Dry Hop	Citra	25 g	3 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale

### Extras

Type	Name	Amount	Use for	Time
Flavor	Pulpa mango	800 g	Secondary	5 day(s)
Flavor	Sok jabko+mango	1000 g	Secondary	5 day(s)