

## 4 chmiele Pale Ale

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- Gravity **10 BLG**
- ABV **4 %**
- IBU **44**
- SRM **4.2**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **73 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (66.7%)	80 %	5
Grain	Viking Wheat Malt	0.3 kg (6.7%)	83 %	5
Grain	Strzegom Bursztynowy	0.2 kg (4.4%)	70 %	49
Grain	Colorado Pale Malt (2 Row) US	1 kg (22.2%)	79 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	60 min	12.5 %
Aroma (end of boil)	Sybilla	30 g	5 min	3.5 %
Aroma (end of boil)	Puławski	30 g	0 min	6 %
Aroma (end of boil)	Oktawia	30 g	0 min	7.1 %
Dry Hop	Sybilla	20 g	6 day(s)	3.5 %
Dry Hop	Oktawia	20 g	6 day(s)	7.1 %
Dry Hop	lunga	20 g	3 day(s)	12.5 %
Dry Hop	Puławski	20 g	3 day(s)	6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	500 ml	Fermentis

## Notes

- Warka 18. Gęstwa po East Kent PA, warzone 22.09. Gęstość początkowa 10 BLG, przy przelewaniu na cichą 1 BLG.  
*Sep 18, 2017, 11:37 AM*