

## Pale Ale WARKA#2

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **73**
- SRM **3.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **1 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **29.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	PALE ALE/PILS 4,5EBC BYDGOSZCZ	5 kg (100%)	80 %	4.5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Falconers Flight 11,3% goryczkowy USA	15 g	60 min	11.3 %
Boil	lunga 12.5% goryczka PL	15 g	60 min	12.5 %
Boil	Mosaic 11.8% aromatyczny USA	15 g	30 min	11.8 %
Boil	Sumit 18% goryczka USA	15 g	30 min	18 %
Aroma (end of boil)	Citra 14.2 % aromat USA	15 g	5 min	14.2 %
Dry Hop	Mosaic 11.8% aromatyczny USA	15 g	7 day(s)	11.8 %
Dry Hop	Citra 14.2 % aromat USA	15 g	7 day(s)	14.2 %

Dry Hop	Sybila 8.4% aromat PL	30 g	7 day(s)	8.4 %
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### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05 gęstwa	Ale	Slant	200 ml	---