

## pierwsze

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **36**
- SRM **5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **18.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4.5 kg (86.5%)	85 %	7
Grain	Carahell	0.2 kg (3.8%)	77 %	26
Grain	Weyermann - Carapils	0.5 kg (9.6%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	10 g	60 min	12.5 %
Boil	Citra	12 g	20 min	12 %
Boil	Talus	12 g	20 min	9 %
Boil	Citra	20 g	5 min	12 %
Boil	Talus	20 g	5 min	9 %
Dry Hop	Citra	30 g	4 day(s)	12 %
Dry Hop	Talus	30 g	4 day(s)	9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis