

## Pierwsze wejście pałkarza

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **60**
- SRM **10.8**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.1 liter(s)**
- Total mash volume **14.8 liter(s)**

### Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **11.1 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Pale Ale	2.3 kg (62.2%)	80.5 %	6
Grain	BESTMALZ - Melanoidynowy	0.5 kg (13.5%)	75 %	70
Grain	Weyermann - Carared	0.5 kg (13.5%)	75 %	45
Grain	Bestmalz - Carapilis	0.3 kg (8.1%)	75 %	5
Grain	Acid Malt	0.1 kg (2.7%)	58.7 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	20 g	60 min	12.9 %
Boil	Citra	10 g	20 min	12.9 %
Aroma (end of boil)	Cascade	10 g	10 min	7.3 %
Aroma (end of boil)	Simcoe	10 g	0 min	12.9 %
Aroma (end of boil)	Citra	10 g	0 min	12.9 %
Aroma (end of boil)	Cascade	10 g	0 min	7.3 %
Aroma (end of boil)	Amarillo	10 g	0 min	8.5 %
Dry Hop	Simcoe	20 g	3 day(s)	12.9 %

Dry Hop	Citra	30 g	3 day(s)	12.3 %
Dry Hop	Cascade	30 g	3 day(s)	7.3 %
Dry Hop	Amarillo	40 g	3 day(s)	8.5 %

## Yeasts

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