

## benc z humorkiem

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **57**
- SRM **5.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **15.6 liter(s)**

### Steps

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

### Mash step by step

- Heat up **11.5 liter(s)** of strike water to **75.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **9.8 liter(s)** of **76C** water or to achieve **17.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (85.4%)	77 %	5
Grain	Płatki owsiane	0.4 kg (9.8%)	80 %	3
Grain	Karmelowy Czerwony	0.2 kg (4.9%)	75 %	59

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	15 g	45 min	12 %
Boil	Citra	17 g	30 min	12 %
Boil	Citra	17 g	10 min	12 %
Aroma (end of boil)	WAI-ITI	30 g	0 min	1.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale