

## Koniec zimy

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **78**
- SRM **18**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **74 liter(s)**
- Trub loss **2 %**
- Size with trub loss **76.2 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **88.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **63.7 liter(s)**
- Total mash volume **81.9 liter(s)**

### Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **40 min**
- Temp **80 C**, Time **10 min**

### Mash step by step

- Heat up **63.7 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **80C**
- Sparge using **43 liter(s)** of **76C** water or to achieve **88.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Caraaroma	1 kg (5.5%)	78 %	400
Grain	Weyermann Extra Pale Premium Pilsner malt	9.2 kg (50.5%)	80 %	3
Grain	Cara Crystal 150 EBC Castle Malting	2 kg (11%)	78 %	150
Grain	Monachijski typ I Weyermann	2 kg (11%)	73 %	80
Grain	Płatki owsiane	4 kg (22%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	180 g	70 min	5.8 %
Boil	Amarillo	30 g	80 min	8 %
Boil	Citra	28.3 g	80 min	25.2 %
Boil	Simcoe	28.3 g	20 min	27 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Kveik v.3	Ale	Liquid	3000 ml	moje
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