

## Kielce E.8 - 16.03.2024

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **31**
- SRM **5.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **17.9 liter(s)**

### Mash information

- Mash efficiency **84 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.4 liter(s)**
- Total mash volume **12.6 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **1 min**

### Mash step by step

- Heat up **9.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **11.7 liter(s)** of **76C** water or to achieve **17.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.85 kg (90.5%)	80 %	5
Grain	Cookie Viking Malt	0.3 kg (9.5%)	72 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	amora preta	16 g	60 min	9 %
Boil	amora preta	10 g	10 min	9 %
Aroma (end of boil)	amora preta	40 g	1 min	9 %

### Yeasts

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

### Notes

- Warzenie: 16.03. - 13 blg  
Fermentacja 17.03 - us05 - 17/18'c potem do 20/21  
Cicha: 27.03. - 3.2 blg  
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