

## Piątek 13-go

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **41**
- SRM **40.1**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **71 C**, Time **10 min**

### Mash step by step

- Heat up **15.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **71C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.7 kg (51.9%)	80 %	5
Grain	Monachijski	1 kg (19.2%)	80 %	16
Grain	Simpsons - Coffee Malt	0.5 kg (9.6%)	74 %	296
Grain	Strzegom Karmel 300	0.3 kg (5.8%)	70 %	299
Grain	Jęczmień palony	0.45 kg (8.7%)	55 %	985
Grain	Briess - Chocolate Malt	0.25 kg (4.8%)	60 %	690

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	15 g	60 min	13.2 %
Boil	Simcoe	20 g	15 min	13.2 %
Boil	Simcoe	15 g	5 min	13.2 %

### Yeasts

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