

## AA

- Gravity **17.3 BLG**
- ABV ---
- IBU **50**
- SRM **40**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **8 %**
- Size with trub loss **20.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **71 C**, Time **30 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **19.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **71C**
- Keep mash **2 min** at **78C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4 kg (60.6%)	85 %	7
Grain	Carafa	0.2 kg (3%)	70 %	664
Grain	Simpsons - Coffee Malt	0.2 kg (3%)	74 %	296
Grain	Monachijski	1 kg (15.2%)	80 %	25
Grain	Briess - Chocolate Malt	0.5 kg (7.6%)	60 %	690
Grain	Jęczmień palony	0.2 kg (3%)	55 %	985
Grain	Strzegom pszeniczny	0.5 kg (7.6%)	81 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	30 min	10 %
Boil	Kent Goldings	30 g	20 min	5.5 %

### Yeasts

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