

mały dym

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **36**
- SRM **37.4**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **12 %**
- Size with trub loss **22.4 liter(s)**
- Boil time **75 min**
- Evaporation rate **15 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **68 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **75 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.3 kg (55%)	79 %	6
Grain	Słód Wędzony Steinbach	1 kg (16.7%)	80 %	5
Grain	Brown Malt (British Chocolate)	0.3 kg (5%)	70 %	128
Grain	Briess - Chocolate Malt	0.3 kg (5%)	60 %	690
Grain	Fawcett - Pale Chocolate	0.3 kg (5%)	71 %	600
Grain	Jęczmień palony	0.4 kg (6.7%)	55 %	985
Grain	Płatki owsiane	0.4 kg (6.7%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	35 g	60 min	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	12 g	Safale