

prawie jak RIS z resztek

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **56**
- SRM **44.6**
- Style **Russian Imperial 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 **79 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **29.1 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **60 min**
- Temp **79 C**, Time **1 min**

Mash step by step

- Heat up **22 liter(s)** of strike water to **47.9C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **64C**
- Keep mash **1 min** at **79C**
- Sparge using **10.4 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	3.5 kg (49.3%)	80 %	5
Grain	Strzegom Monachijski typ II	1 kg (14.1%)	79 %	22
Grain	Żytni	1 kg (14.1%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.3 kg (4.2%)	75 %	150
Grain	Castle Cafe	0.5 kg (7%)	75.5 %	480
Grain	czekoladowy żytni Strzegom	0.285 kg (4%)	75 %	450
Grain	Strzegom Czekoladowy 1200	0.23 kg (3.2%)	68 %	1202
Grain	Carafa III special	0.285 kg (4%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	90 g	60 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Safale

Extras

Type	Name	Amount	Use for	Time
Flavor	Płatki dębowe VANILLA	20 g	Secondary	7 day(s)
Flavor	Płatki dębowe TOFFIE	20 g	Secondary	7 day(s)