

Czarnuszek

- Gravity **12.9 BLG**
- ABV ---
- IBU **32**
- SRM **46.6**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.3 liter(s)**
- Total mash volume **26.1 liter(s)**

Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **20.3 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.2 kg (55.2%)	80 %	5
Grain	Strzegom Monachijski typ II	1 kg (17.2%)	79 %	22
Grain	Karmelowy Czerwony	0.5 kg (8.6%)	75 %	150
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.4%)	68 %	1200
Grain	Jęczmień palony	0.4 kg (6.9%)	55 %	985
Grain	Płatki owsiane	0.5 kg (8.6%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	25 g	60 min	7 %
Boil	Kent Goldings	25 g	30 min	5.5 %
Boil	Fuggles	25 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Safale US-05	Ale	Dry	11 g	Fermentis
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