

## Małą czarną, proszę!

- Gravity **11.6 BLG**
- ABV ---
- IBU **31**
- SRM **33.4**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **20.5 liter(s)**

### Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **16.4 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **10 min** at **72C**
- Sparge using **13 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	3.2 kg (78%)	85 %	7
Grain	Jęczmień palony	0.3 kg (7.3%)	55 %	985
Grain	Płatki jęczmienne	0.5 kg (12.2%)	70 %	3
Grain	Weyermann - Carafa II	0.1 kg (2.4%)	70 %	837

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	55 min	7 %
Boil	English Golding	15 g	15 min	4.8 %
Aroma (end of boil)	Sovereign	10 g	5 min	5 %
Aroma (end of boil)	Tettnang	10 g	5 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	300 ml	Safale

### Extras

Type	Name	Amount	Use for	Time
Flavor	Laska wanilli	3 g	Boil	60 min
Flavor	Ziarna kawy	30 g	Boil	15 min