

Mroki

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **37**
- SRM **45.4**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **10 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	2 kg (44.4%)	80 %	7
Grain	Strzegom Monachijski typ II	1 kg (22.2%)	79 %	22
Grain	kawowy jasny	0.3 kg (6.7%)	75 %	250
Grain	Carafa III	0.3 kg (6.7%)	70 %	1300
Grain	Strzegom Barwiący	0.1 kg (2.2%)	68 %	1300
Grain	Płatki owsiane	0.3 kg (6.7%)	85 %	3
Grain	Pszenica niesłodowana	0.3 kg (6.7%)	75 %	3
Grain	Briess - Dark Chocolate Malt	0.2 kg (4.4%)	60 %	827

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Nugget	15 g	60 min	13 %
Boil	Nugget	10 g	20 min	13 %

Yeasts

Name	Type	Form	Amount	Laboratory
US 04	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Spice	tonka	5 g	Secondary	2 day(s)