

Czorne

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **37**
- SRM **45.7**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **30.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **18.8 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **15 min** at **76C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (80%)	85 %	7
Grain	Jęczmień palony	0.5 kg (8%)	55 %	1150
Grain	Weyermann - Carafa III special	0.25 kg (4%)	70 %	1024
Grain	Weyermann - Chocolate Wheat	0.5 kg (8%)	70 %	950

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	100 g	35 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale