

Pierwsze

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **87**
- SRM **55**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **15.8 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **12.3 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **3.9 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale	1.575 kg (45%)	80 %	5
Grain	Pszoniczny wędzony dębem	1.05 kg (30%)	80 %	3
Grain	Palone żyto	0.7 kg (20%)	55 %	985
Grain	Płatki owsiane	0.175 kg (5%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	45 g	65 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	10 g	Safale