

Stout 1

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **28**
- SRM **31.9**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23 liter(s)**

Steps

- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **5 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **17.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **5 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	3 kg (58.8%)	80 %	7
Grain	Monachijski	1 kg (19.6%)	80 %	16
Grain	Płatki owsiane	0.5 kg (9.8%)	60 %	3
Grain	Carafa III	0.2 kg (3.9%)	70 %	1034
Grain	Fawcett - Pszeniczny Czekoladowy	0.25 kg (4.9%)	73 %	1001
Grain	Jęczmień palony	0.15 kg (2.9%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Boil	Lublin (Lubelski)	20 g	0 min	4 %

Yeasts

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