

Dry stout z resztek

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **35**
- SRM **35**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **0 %**
- Size with trub loss **25 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **30.1 liter(s)**

Steps

- Temp **51 C**, Time **10 min**
- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23.4 liter(s)** of strike water to **55.4C**
- Add grains
- Keep mash **10 min** at **51C**
- Keep mash **60 min** at **69C**
- Keep mash **10 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **30.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (52.2%)	80 %	4
Grain	Strzegom Pszeniczny	1.5 kg (22.4%)	81 %	6
Grain	Jęczmień niesłodowany	1 kg (14.9%)	75 %	2
Grain	Briess - Chocolate Malt	0.7 kg (10.4%)	60 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Boil	Puławski	100 g	5 min	6 %
Boil	Columbus/Tomahawk/Zeus	15 g	5 min	15.5 %

Yeasts

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