

## Polish Stout

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- Gravity **14.3 BLG**
- ABV ---
- IBU **33**
- SRM **39.7**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **28.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

### Steps

- Temp **45 C**, Time **15 min**
- Temp **62 C**, Time **25 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **24 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **15 min** at **45C**
- Keep mash **25 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **34.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	5 kg (62.5%)	80 %	5
Grain	Pszenica	2 kg (25%)	80 %	5
Grain	Barwiący ciemny	0.5 kg (6.3%)	66 %	1200
Grain	Chocolate fawcett	0.5 kg (6.3%)	66 %	1100

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	50 g	30 min	11.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US- 05	Ale	Dry	11 g	---