

## Polish stout

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **36**
- SRM **29.5**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **15.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3 kg (58.3%)	79 %	6
Grain	Strzegom Monachijski typ II	1 kg (19.4%)	79 %	22
Grain	Jęczmień palony	0.25 kg (4.9%)	55 %	985
Grain	Płatki owsiane	0.5 kg (9.7%)	60 %	3
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.9%)	68 %	1200
Grain	Fawcett - Brown	0.2 kg (3.9%)	72 %	180

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Whirlpool	Oktawia	20 g	10 min	7.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	1000 ml	Fermentum Mobile