

## polish dry stout 10-11

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **34**
- SRM **31.6**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **72 C**, Time **60 min**
- Temp **80 C**, Time **10 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **10 min** at **80C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzniejszy	2.15 kg (39.1%)	80 %	4
Grain	Caramel/Crystal Malt - 10L	1.7 kg (30.9%)	75 %	20
Grain	Bestmalz Red X	1.15 kg (20.9%)	79 %	80
Grain	Carafa III	0.5 kg (9.1%)	70 %	1034

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	iunga	30 g	60 min	11 %

### Yeasts

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

### Extras

Type	Name	Amount	Use for	Time
Flavor	espresso	100 g	Boil	60 min