

## Brown porter

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **28**
- SRM **26.2**
- Style **Brown Porter**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **22.9 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **16.4 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **1 min** at **76C**
- Sparge using **24.4 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilznieński	5.5 kg (84%)	81 %	4
Grain	Strzegom Karmel 150	0.5 kg (7.6%)	75 %	150
Grain	Strzegom Karmel 600	0.2 kg (3.1%)	68 %	601
Grain	Strzegom Czekoladowy ciemny	0.35 kg (5.3%)	68 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	35 g	60 min	10 %
Boil	Fuggles	20 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Liquid	200 ml	Fermentum Mobile