

P18

- Gravity **12.6 BLG**
- ABV ---
- IBU **21**
- SRM **27.8**
- Style **Brown Porter**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.4 liter(s)**
- Total mash volume **11.2 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **8.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Bestt Pale Ale	2 kg (71.4%)	80.5 %	6
Grain	Fawcett - Brown	0.3 kg (10.7%)	72 %	180
Grain	Weyermann - Caraamber	0.15 kg (5.4%)	75 %	65
Grain	Fawcett - Pszeniczny Czekoladowy	0.1 kg (3.6%)	73 %	1001
Grain	Barley, Flaked	0.25 kg (8.9%)	70 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Willamette	15 g	60 min	5 %
Boil	Willamette	10 g	20 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	10 g	Safale

Extras

Type	Name	Amount	Use for	Time
Flavor	Kakao	40 g	Boil	7 min