

Smoluch

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **29**
- SRM **34.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.9 liter(s) / kg**
- Mash size **22.3 liter(s)**
- Total mash volume **30 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **22.3 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	5.5 kg (71.4%)	81 %	5
Grain	Caraaroma	0.4 kg (5.2%)	78 %	400
Grain	Weyermann - Carafa II	0.4 kg (5.2%)	70 %	837
Grain	Simpsons - Coffee Malt	0.4 kg (5.2%)	74 %	296
Grain	Fawcett - Pszeniczny Czekoladowy	0.2 kg (2.6%)	73 %	1001
Grain	Oats, Flaked	0.4 kg (5.2%)	80 %	2
Grain	Barley, Flaked	0.4 kg (5.2%)	70 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	6.5 %
Boil	Willamette	25 g	10 min	7.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	450 ml	Safale