

Smolarz

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **24**
- SRM **23.4**
- Style **Brown Porter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **25.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **74 C**, Time **10 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **74C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Wędzony Steinbach	3 kg (46.5%)	80 %	5
Grain	Brown Malt (British Chocolate)	1 kg (15.5%)	70 %	128
Grain	Płatki owsiane	0.6 kg (9.3%)	85 %	3
Grain	Jęczmień palony	0.25 kg (3.9%)	55 %	985
Grain	Płatki pszeniczne	0.6 kg (9.3%)	85 %	3
Grain	Viking Pale Ale malt	1 kg (15.5%)	80 %	5

Hops

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

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11 g	Danstar