Porter Angielski

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **34**
- SRM **45**
- Style **Robust 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 **3.5 liter(s) / kg**
- Mash size **10.4 liter(s)**
- Total mash volume **13.4 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **10.4 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	1.7 kg *(57.2%)*	79 %	16
Grain	Caraaroma	0.15 kg *(5.1%)*	78 %	400
Grain	Carafa	0.235 kg *(7.9%)*	70 %	664
Grain	Castle Cafe	0.12 kg *(4%)*	75.5 %	480
Grain	Monachijski Ciemny Steinbach	0.505 kg *(17%)*	100 %	30
Grain	Czekoladowy Fawcett	0.13 kg *(4.4%)*	60 %	1200
Grain	Strzegom Czekoladowy ciemny	0.13 kg *(4.4%)*	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	20 g	60 min	7.5 %
Boil	Fuggles	10 g	15 min	7.5 %
Boil	Fuggles	20 g	0 min	7.5 %

Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

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