Porter z miętą

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **32**
- SRM **43.5**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **29.4 liter(s)**
- Total mash volume **39.2 liter(s)**

Steps

- Temp **64 C**, Time **10 min**
- Temp **68 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **29.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **10 min** at **64C**
- Keep mash **50 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.9 kg *(39.8%)*	80 %	5
Grain	Pilzneński	3.9 kg *(39.8%)*	81 %	4
Grain	Strzegom Czekoladowy jasny	0.5 kg *(5.1%)*	68 %	400
Grain	Strzegom pszenica prażona	0.5 kg *(5.1%)*	70 %	1000
Grain	Strzegom Barwiący żytni	0.5 kg *(5.1%)*	68 %	1300
Grain	Strzegom Karmel 150	0.3 kg *(3.1%)*	75 %	150
Grain	Strzegom Karmel 300	0.2 kg *(2%)*	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	hallertauer taurus	20 g	60 min	14 %
Boil	hallertauer taurus	20 g	15 min	14 %
Boil	hallertauer taurus	20 g	5 min	14 %

Yeasts

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

Name	Type	Form	Amount	Laboratory
FM53 Kveik	Ale	Liquid	100 ml	Dom

Extras

Type	Name	Amount	Use for	Time
Spice	Mięta pieprzowa	80 g	Boil	5 min

Notes

- Na podstawie:
  http://www.piwo.org/topic/12140-wolno%C5%9Bciowy-browar-domowy-libertarian-homebrewery/page-19#entry411665
  100g ekstraktu ze starteru (z 700 ml wody) jako zastępstwo 100g pilzneńskiego
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