

## 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 **BREWNES.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  
*Jul 3, 2017, 2:14 AM*