

Darth Porter

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **47**
- SRM **23.8**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **69 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **5 min** at **76C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (72.9%)	80 %	5
Grain	Strzegom Karmel 30	0.5 kg (10.4%)	75 %	30
Grain	Karmel Pils	0.5 kg (10.4%)	80.5 %	2
Grain	Strzegom Czekoladowy 1200	0.15 kg (3.1%)	68 %	1202
Grain	Strzegom Barwiący	0.15 kg (3.1%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	13.5 %
Boil	Lublin (Lubelski)	15 g	20 min	3.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	100 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
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Water Agent	chlorek wapnia	10 g	Boil	60 min
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