

Porter

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **20**
- SRM **23.8**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **27.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **77 C**, Time **0 min**

Mash step by step

- Heat up **14.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **0 min** at **77C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **27.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (73.7%)	80 %	6
Grain	Fawcett - Brown	0.5 kg (10.5%)	72 %	180
Grain	Karmelowy Czerwony	0.5 kg (10.5%)	75 %	59
Grain	Pszeniczny Czekoladowy Weyermann	0.25 kg (5.3%)	73 %	1001

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	30 g	50 min	4.3 %
Boil	Fuggles	20 g	20 min	4.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale