

Porter

- Gravity **20 BLG**
- ABV **8.8 %**
- IBU **37**
- SRM **50.9**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **20.9 liter(s)**

Mash information

- Mash efficiency **58 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **25 liter(s)**
- Total mash volume **33.3 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **25 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **4.2 liter(s)** of **76C** water or to achieve **20.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	1.7 kg (20.4%)	85 %	7
Grain	Monachijski typ II 20-25 EBC Weyermann	3.7 kg (44.4%)	80 %	20
Grain	Weyermann Caramunich 3	0.73 kg (8.8%)	76 %	150
Grain	Caraaroma	0.73 kg (8.8%)	78 %	400
Grain	Weyermann - Carafa III	0.37 kg (4.4%)	70 %	1024
Grain	Aroma CastleMalting	1.1 kg (13.2%)	78 %	100

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Marynka	15 g	10 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale S-33	Ale	Dry	10.5 g	---
-------------	-----	-----	--------	-----