

lumberjack

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **54**
- SRM **28.8**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **0 %**
- Size with trub loss **25 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **32.2 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **29 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **22.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **77C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **32.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (54.3%)	80 %	5
Grain	Weyermann - Rye Malt	1.2 kg (18.6%)	85 %	7
Grain	Monachijski	1 kg (15.5%)	80 %	16
Grain	Carafa III	0.25 kg (3.9%)	70 %	1034
Grain	Weyermann - Chocolate Rye	0.25 kg (3.9%)	20 %	493
Grain	Weyermann - Chocolate Wheat	0.25 kg (3.9%)	74 %	788

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	20 g	30 min	12.3 %
Boil	Simcoe	20 g	30 min	13.3 %
Aroma (end of boil)	Citra	20 g	15 min	12.3 %
Dry Hop	Citra	60 g	7 day(s)	12.3 %
Aroma (end of boil)	Simcoe	20 g	15 min	13.3 %
Dry Hop	Simcoe	60 g	7 day(s)	13.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	14.38 g	Fermentis

Notes

- przerwa maltozowa Pale ale, żytni i monachijski
cold brew ciemnych słodów 15 min i dodajemy na MO
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