

Sabro

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **95**
- SRM **11.4**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **25.4 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **19.8 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (70.8%)	80 %	5
Grain	Grodzicki pszeniczny wędzony dębem	1 kg (17.7%)	80 %	3
Grain	Monachijski	0.5 kg (8.8%)	80 %	16
Grain	Weyermann - Carafa I	0.15 kg (2.7%)	70 %	690

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	HBC 472 Experimental	30 g	60 min	9.3 %
Boil	HBC 472 Experimental	20 g	40 min	9.3 %
Aroma (end of boil)	Idaho 7	50 g	25 min	12.7 %
Aroma (end of boil)	Idaho 7	50 g	0 min	12.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Fm 702	Ale	Liquid	30 ml	---