

Hoppy session rye stout

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **53**
- SRM **40.1**
- Style **Dry 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **47 C**, Time **10 min**
- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **51.5C**
- Add grains
- Keep mash **10 min** at **47C**
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **76C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	2.1 kg (39.6%)	80 %	16
Grain	Viking Pale Ale malt	1.2 kg (22.6%)	80 %	5
Grain	Żytni	1 kg (18.9%)	85 %	8
Grain	Weyermann - Carafa II	1 kg (18.9%)	70 %	837

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	25 g	60 min	13 %
Boil	Cascade PL	25 g	15 min	5.2 %
Boil	Sorachi Ace	20 g	15 min	10 %
Dry Hop	Sorachi Ace	30 g	10 day(s)	10 %

Yeasts

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

Notes

- Do chłodzenia dolano 5L wody - ostatecznie ok. 21L gotowego piwa wraz z 95 g/L cukru do refermentacji.
Alkohol: ok. 4,3% obj.
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