

american dark rye ale

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **54**
- SRM **30.3**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

Steps

- Temp **67 C**, Time **80 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.8 kg (70.4%)	80 %	5
Grain	Żytni	1 kg (18.5%)	85 %	8
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.7%)	68 %	1200
Grain	Carafa III	0.2 kg (3.7%)	70 %	1034
Grain	Pszeniczny Czekoladowy	0.2 kg (3.7%)	73 %	1001

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Boil	Rakau (NZ)	25 g	15 min	9.5 %
Boil	Citra	25 g	15 min	13.3 %
Boil	Citra	25 g	3 min	13.3 %
Boil	Rakau (NZ)	25 g	3 min	9.5 %
Dry Hop	Rakau (NZ)	50 g	5 day(s)	9.5 %
Dry Hop	Simcoe	50 g	5 day(s)	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	---

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	10 min
Flavor	zest cytryna bio i limonka	50 g	Boil	5 min