

Czarnulek

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **55**
- SRM **20**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **26.3 liter(s)**
- Total mash volume **32.9 liter(s)**

Steps

- Temp **65 C**, Time **50 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **26.3 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **76C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **29.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - 2 Row Brewers Malt	6 kg (89.8%)	80.5 %	4
Grain	Carafa special 1	0.3 kg (4.5%)	70 %	1100
Grain	Briess - Carapils Malt	0.28 kg (4.2%)	74 %	3
Adjunct	Rice Hulls	0.1 kg (1.5%)	1 %	1

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	30 g	5 min	13.1 %
Boil	Citra	35 g	5 min	12.9 %
Boil	Centennial	35 g	5 min	7.3 %
Boil	Amarillo	35 g	0 min	8 %
Boil	Simcoe	30 g	60 min	13.1 %
Dry Hop	Simcoe	35 g	4 day(s)	13.1 %
Dry Hop	Citra	30 g	4 day(s)	12.9 %
Dry Hop	Amarillo	30 g	4 day(s)	8 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Chico West coast Ale 1 OYL-004 (starter)	Ale	Liquid	1200 ml	Omega Yeast
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Extras

Type	Name	Amount	Use for	Time
Fining	Super Irish Moss	1.5 g	Boil	10 min
Water Agent	AMS	6.4 g	Mash	60 min
Water Agent	DWB	35.4 g	Mash	60 min
Other	Yeast nutrient WLN1000	2.8 g	Boil	10 min

Notes

- Zacieranie 27.5 litra wody do tego AMS 4.7 ml + DWB 26 g do wysladzania 10 litrow wody i AMS 1.7 ml + DWB 9.4 g
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