

Ciemniak1

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **28**
- SRM **31.4**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **90 min**
- Evaporation rate **5 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **69 C**, Time **90 min**
- Temp **72 C**, Time **10 min**
- Temp **79 C**, Time **0 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **90 min** at **69C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **79C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	1.5 kg (31.2%)	90 %	7
Grain	Acid Malt	0.08 kg (1.7%)	58.7 %	9
Grain	Melanoiden Malt	1 kg (20.8%)	80 %	70
Grain	Strzegom Wiedeński	1.5 kg (31.2%)	80 %	12
Grain	Fawcett - Pszeniczny Czekoladowy	0.25 kg (5.2%)	73 %	1001
Grain	Weyermann - Carafa III	0.1 kg (2.1%)	75 %	1024
Grain	Strzegom Barwiący	0.15 kg (3.1%)	60 %	1300
Grain	Płatki orkiszowe	0.1 kg (2.1%)	85 %	4
Grain	Płatki owsiane	0.13 kg (2.7%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	30 g	60 min	7 %
Boil	East Kent Goldings	20 g	20 min	5.1 %
Aroma (end of boil)	East Kent Goldings	20 g	0 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP004 - Irish Ale Yeast	Ale	Liquid	40 ml	White Labs

Extras

Type	Name	Amount	Use for	Time
Flavor	Herbata wiśnie w rumie	25 g	Boil	10 min