

Stout Opalenicki

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **49**
- SRM **37.3**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **23.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.7 liter(s)**
- Total mash volume **22.2 liter(s)**

Steps

- Temp **72 C**, Time **60 min**
- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **16.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **60 min** at **72C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (72.1%)	81 %	4
Grain	Monachijski	0.4 kg (7.2%)	80 %	16
Grain	Słód Wędzony Steinbach	0.2 kg (3.6%)	80 %	5
Grain	Pszeniczny	0.2 kg (3.6%)	85 %	4
Grain	Caraaroma	0.2 kg (3.6%)	78 %	400
Grain	Strzegom Czekoladowy ciemny	0.3 kg (5.4%)	68 %	1200
Grain	Strzegom pszenica prażona	0.25 kg (4.5%)	70 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %
Boil	Lublin (Lubelski)	30 g	10 min	4 %

Yeasts

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

Notes

- Zapamiętać w końcu o różnicy blg przez temperaturę, bo wychodzi w chuj mniej piwa
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