

Brutalna IPA

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **48**
- SRM **5.5**
- Style **English 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 **15 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

- Temp **62 C**, Time **45 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **76C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (38.8%)	81 %	4
Grain	Rye, Flaked	1 kg (19.4%)	78.3 %	4
Grain	Strzegom Monachijski typ I	2 kg (38.8%)	79 %	16
Grain	Strzegom Karmel 30	0.15 kg (2.9%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	30 g	60 min	10.5 %
Boil	Zula	20 g	15 min	7 %
Aroma (end of boil)	zula	30 g	15 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London ESB Ale	Ale	Slant	250 ml	Wyeast Labs

Notes

- Glukoamylaza 4g
zacieranie 61 - 62C
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