

Jo Polako

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **33**
- SRM **7.2**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **10 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **7.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **18.2 liter(s)** of **76C** water or to achieve **23.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	2.1 kg (50%)	80 %	7
Liquid Extract	Bruntal	1.7 kg (40.5%)	81 %	26
Grain	Płatki orkiszowe	0.4 kg (9.5%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	45 min	10 %
Boil	Lublin (Lubelski)	15 g	15 min	4 %
Aroma (end of boil)	Marynka	10 g	5 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	10 g	5 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 04	Ale	Dry	11 g	---