

polskie ale

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **24**
- SRM **4.6**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **24.2 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18.8 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (92.9%)	81 %	4
Grain	Karmelowy Jasny 30EBC	0.38 kg (7.1%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	12 g	60 min	9.4 %
Boil	Lublin (Lubelski)	25 g	20 min	4.6 %
Boil	Lublin (Lubelski)	25 g	10 min	4.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
05	Ale	Dry	11.5 g	---