

# polskie ale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **45**
- SRM **3.5**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (100%)	81 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Marynka	25 g	60 min	10 %
Mash	Lublin (Lubelski)	25 g	60 min	4 %
Boil	Marynka	15 g	60 min	10 %
Boil	Marynka	35 g	30 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	15 g	10 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	35 g	0 min	4 %
Dry Hop	Marynka	25 g	4 day(s)	10 %
Dry Hop	Lublin (Lubelski)	25 g	4 day(s)	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis
gestwa z poprzedniego piwa				