

# Polskie Ale

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **69**
- SRM **10.6**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **2 min**

## Mash step by step

- Heat up **19.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (60.6%)	80 %	5
Grain	Pilzneński	2 kg (30.3%)	81 %	4
Grain	Strzegom Karmel 150	0.6 kg (9.1%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	30 g	70 min	8.3 %
Boil	Książęcy	30 g	40 min	7 %
Boil	lunga	30 g	40 min	11 %
Aroma (end of boil)	Oktawia	30 g	0 min	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis