

# Polskie Ale

- Gravity **12.1 BLG**
- ABV ---
- IBU **36**
- SRM **4.2**

## Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **33 liter(s)**
- Total mash volume **44 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **33 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **41.3 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	1 kg (9.1%)	85 %	4
Grain	Strzegom Pilzniejszy	9 kg (81.8%)	80 %	4
Grain	Optima Karmel 6-9	1 kg (9.1%)	80 %	7.5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	50 g	60 min	11.6 %
Boil	lunga	20 g	15 min	11.6 %
Boil	Lublin (Lubelski)	20 g	15 min	3.5 %
Aroma (end of boil)	Lublin (Lubelski)	50 g	0 min	3.5 %
Aroma (end of boil)	Sybilla	50 g	0 min	3.5 %
Dry Hop	Sybilla	50 g	15 day(s)	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	10 g	Mangrove Jack's
Mangrove Jack's M54 California Lager	Ale	Dry	10 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	10 g	Boil	10 min