

# Polskie ale JA ŁOWCA

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **30**
- SRM **3.8**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **14.8 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **11.5 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **17.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3 kg (90.9%)	81 %	4
Grain	Strzegom Wiedeński	0.3 kg (9.1%)	79 %	10

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10 %
Boil	pałacowy	20 g	10 min	5 %
Boil	pałacowy	60 g	0 min	5 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Spice	jałowiec	50 g	Boil	10 min