

# Ludkowe 1 Jasne Pełne

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **29**
- SRM **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 **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

## Steps

- Temp **63 C**, Time **35 min**
- Temp **72 C**, Time **25 min**
- Temp **77 C**, Time **10 min**

## Mash step by step

- Heat up **15.9 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **35 min** at **63C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **77C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Bel	4 kg (75.5%)	77 %	4
Grain	Briess - Munich Malt 10L	1 kg (18.9%)	78 %	20
Grain	Caramel/Crystal Malt - 20L	0.3 kg (5.7%)	75 %	39

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	70 min	10 %
Boil	Marynka	5 g	25 min	10 %
Boil	Lublin (Lubelski)	5 g	25 min	4 %
Boil	Lublin (Lubelski)	20 g	5 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale