

## #15 Jasne Pełne

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **39**
- SRM **4.1**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **2 %**
- Size with trub loss **20.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **22.6 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.75 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19 liter(s)**

### Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **68.7C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **22.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.7 kg (92.5%)	81 %	4
Grain	Strzegom Karmel 30	0.3 kg (7.5%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Boil	Lublin (Lubelski)	20 g	20 min	4 %
Boil	Lublin (Lubelski)	20 g	10 min	4 %

### Yeasts

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