

# #1\_19\_PL\_jasne\_dziewiętnaste

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **29**
- SRM **4.1**
- Style **Special/Best/Premium Bitter**

## Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **29.7 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.4 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **2 min** at **78C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **29.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzniejszy	5 kg (93.5%)	80 %	4
Grain	Carahell	0.35 kg (6.5%)	77 %	26

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	20 g	60 min	4 %
Boil	Puławski	20 g	60 min	6.1 %
Boil	Lublin (Lubelski)	10 g	30 min	4 %
Boil	Puławski	10 g	30 min	6.1 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	3 min	4 %
Aroma (end of boil)	Puławski	20 g	3 min	6.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirfloc	2 g	Boil	15 min