

# jasne pełne

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **4.7**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **75 liter(s)**
- Trub loss **5 %**
- Size with trub loss **78.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **94.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **54.9 liter(s)**
- Total mash volume **73.2 liter(s)**

## Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **54.9 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **58.3 liter(s)** of **76C** water or to achieve **94.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	10 kg (54.6%)	80 %	4
Grain	Strzegom Monachijski typ I	3 kg (16.4%)	79 %	16
Grain	Strzegom Pszeniczny	0.3 kg (1.6%)	81 %	6
Grain	Strzegom Pale Ale	5 kg (27.3%)	79 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	50 g	60 min	12.9 %
Boil	citra	80 g	15 min	13.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	562.5 ml	Fermentis