jasne pełne

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **36**
- SRM **4.2**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **33.6 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **24 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **36.2 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Eraclea pisner weyerman	3.5 kg *(36.5%)*	80 %	3
Grain	Strzegom Pilzneński	4.5 kg *(46.9%)*	80 %	4
Grain	Strzegom Monachijski typ I	1.5 kg *(15.6%)*	79 %	16
Grain	Strzegom Pszeniczny	0.1 kg *(1%)*	81 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Ariana	30 g	60 min	11.7 %
Boil	Ariana	50 g	15 min	11.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	300 ml	Fermentis

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.