

## piwo 38

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **30**
- SRM **3.7**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **14.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pils	4.5 kg (94.7%)	81 %	4
Grain	Strzegom Monachijski typ I	0.25 kg (5.3%)	79 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Sybilla	20 g	1 min	7.5 %
Boil	Sybilla	20 g	30 min	7.5 %
Boil	Marynka	20 g	40 min	8.8 %
Whirlpool	Sybilla	20 g	20 min	7.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Slant	200 ml	---