

## Polski Pale Ale (nr 1)

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- Gravity **13.1 BLG**
- ABV ---
- IBU **51**
- SRM **7.6**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **10 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **24 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **68 C**, Time **50 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **15.6 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **50 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.65 kg (59.6%)	81 %	4
Grain	Monachijski	1.45 kg (32.6%)	80 %	16
Grain	Strzegom Karmel 30	0.35 kg (7.9%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	40 g	5 min	4 %

### Yeasts

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

### Notes

- Warka nr 1  
Dec 28, 2015, 4:22 PM