

# Polish Pal Ale Test 1

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **87**
- SRM **5.2**

## Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **23.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **16.4 liter(s)**

## Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **12.3 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **23.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (97.6%)	80 %	5
Grain	Strzegom Karmel 150	0.1 kg (2.4%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnat	50 g	60 min	11 %
Boil	Cascade PL	70 g	10 min	5.2 %
Aroma (end of boil)	Cascade PL	30 g	0 min	5.2 %
Dry Hop	Puławski	100 g	3 day(s)	8.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-05	Ale	Dry	11 g	Safale