

## Polish Pale Ale 2.0

---

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **52**
- SRM **3.6**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (90.9%)	82 %	4
Grain	Platki ryżowe	0.5 kg (9.1%)	70 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %
Whirlpool	Zula	100 g	20 min	8.3 %
Whirlpool	Izabella	50 g	20 min	5.1 %
Dry Hop	Zula	100 g	3 day(s)	8.3 %
Dry Hop	Izabella	50 g	3 day(s)	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lutra OYL-071	Ale	Slant	50 ml	Omega
Espe	Ale	Slant	50 ml	---

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips piwowarski	9 g	Mash	60 min
Water Agent	Chlorek wapnia	3 g	Mash	60 min
Water Agent	Kreda(Redukwas)	4 g	Mash	60 min
Water Agent	Kwas Mlekowy 80%	1.3 g	Mash	0 min

## Notes

- 1,3ml Kwasy mlekowy 80% do 23l wody do wyładzania  
Profil wody chmielowy: Ca-111.7/Mg-4/Na-4/Cl-53.5/SO4-144.1/HCO3-102.6/  
Woda dodatkowo utwardzana pod kveiki.  
*Feb 11, 2022, 9:35 AM*