

# Polish Brut IPA #1 - Browar na Wyżynie

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **22**
- SRM **2.6**
- Style **Specialty Beer**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **22.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Premium Pilsner ® Weyermann	4 kg (80%)	81 %	2
Grain	płatki ryżowe błyskawiczne	1 kg (20%)	70 %	1

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Puławski (PL) - granulat	1 g	90 min	6 %
Whirlpool	Oktawia (PL) - granulat	30 g	15 min	9 %
Whirlpool	Puławski (PL) - granulat	30 g	15 min	6 %
Whirlpool	lunga (PL) - granulat	30 g	15 min	11 %
Whirlpool	Oktawia (PL) - granulat	20 g	0 min	7.8 %
Whirlpool	Puławski (PL) - granulat	20 g	0 min	6 %
Whirlpool	lunga (PL) - granulat	20 g	0 min	11 %
Dry Hop	Oktawia (PL) - granulat	50 g	3 day(s)	7.8 %
Dry Hop	Puławski (PL) - granulat	49 g	3 day(s)	6 %

Dry Hop	lunga (PL) - granulat	50 g	3 day(s)	11 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
3 pokolenie FM54 Gorączka kalifornijska	Ale	Slant	300 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Woda demineralizowana	15000 g	Mash	90 min
Water Agent	Siarczan magnezu	7 g	Mash	90 min
Water Agent	Chlorek wapnia	6 g	Mash	90 min
Water Agent	Kwas fosforowy 75%	7 g	Mash	90 min
Other	Glukoamylaza	3 g	Mash	30 min
Other	Pożywka dla drożdży	3.5 g	Boil	15 min
Fining	Mech irlandzki	3 g	Boil	15 min

## Notes

- Glukoamylaza dodana do brzezki. Temperatura brzezki około 60C.

Drugi whirlpool temp < 80C 30min

<https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=R1SXPH9>

Ca+2 Mg+2 Na+ Cl- SO4-2 HCO  
125.1 32.4 5.0 95.6 95.1 69.436  
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