

# Zombie (Groszkowe) #4 - Polskie Pale Ale - Browar na Wyżynie

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **41**
- SRM **4.3**
- 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 **70 min**
- Evaporation rate **15 %/h**
- Boil size **27.7 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 **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pale ale Bestmatz	3.5 kg (70%)	80.5 %	6
Grain	pszeniczny Viking Malt	1 kg (20%)	84 %	5
Grain	Płatki owsiane	0.5 kg (10%)	70 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Zombie (Polishhops) - granulát	15 g	80 min	9.5 %
Boil	Zombie (Polishhops) - granulát	20 g	20 min	9.5 %
Whirlpool	Zombie (Polishhops) - granulát	40 g	15 min	9.5 %
Whirlpool	Zombie (Polishhops) - granulát	40 g	0 min	9.5 %
Dry Hop	Zombie (Polishhops) - granulát	85 g	3 day(s)	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

(4 pokolenie) FM54 Gorączka kalifornijska	Ale	Slant	300 ml	Fermentum Mobile
---	-----	-------	--------	------------------

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Kwas fosforowy 75%	10 g	Mash	70 min
Fining	Mech irlandzki	2 g	Boil	15 min
Other	Browin pożywka dla drożdży	5 g	Boil	5 min

### Notes

- <https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=XWJ5RNN>

Ca+2 Mg+2 Na+ Cl- SO4-2 HCO  
140.0 22.0 9.0 19.0 27.0 184.483

Chmielnie 2 dawka chmielu na whirlpool start w <80C 15 minut.  
*Sep 19, 2018, 3:19 PM*