

# Szwagier, Sąsiad i Ja #4 - Black IPA - Browar na Wyżynie

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **42**
- SRM **25.8**
- Style **Black IPA**

## 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 **17.3 liter(s)**
- Total mash volume **23 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	pilzneński Viking Malt	3.5 kg (58.3%)	81 %	4
Grain	monachijski typ II Viking Malt	1.2 kg (20%)	78 %	22
Grain	karmelowy 600 - Viking Malt	0.3 kg (5%)	65 %	600
Grain	czekoladowy ciemny Viking Malt	0.25 kg (4.2%)	1 %	1000
Grain	płatki owsiane błyskawiczne	0.5 kg (8.3%)	70 %	3
Sugar	cukier	0.25 kg (4.2%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Mosaic (USA) - granulát	25 g	90 min	10.4 %
Boil	Mosaic (USA) - granulát	10 g	20 min	10.4 %
Aroma (end of boil)	Mosaic (USA) - granulát	35 g	3 min	10.4 %

Whirlpool	Mosaic (USA) - granulát	30 g	0 min	10.4 %
Dry Hop	Mosaic (USA) - granulát	100 g	3 day(s)	10.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Liquid	1000 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	2 g	Boil	15 min
Water Agent	sól epsom	3 g	Mash	70 min
Water Agent	sól kuchenna	3 g	Mash	70 min
Water Agent	kwask fosforowy 75%	7 g	Mash	70 min
Water Agent	woda demineralizowana	10000 g	Mash	70 min

## Notes

- Słód czekoladowy dodany do wysładzania.

Ca+2 Mg+2 Na+ Cl- SO4-2 HCO  
80.4 17.4 40.8 66.4 53.9 116.689

<https://www.brewersfriend.com/mash-chemistry-and-brewing-water-calculator/?id=1THR2TH>  
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