

# Przywodziciel

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **47**
- SRM **4.2**
- Style **White IPA**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **14 %/h**
- Boil size **19.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **16.6 liter(s)**

## Steps

- Temp **55 C**, Time **20 min**
- Temp **62 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **12.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **60 min** at **62C**
- Keep mash **5 min** at **76C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód Pilznieński	1 kg (24.1%)	80 %	3.8
Grain	słód Pale Ale	1 kg (24.1%)	79 %	6
Grain	słód pszeniczny	1 kg (24.1%)	82 %	4.5
Grain	płatki pszeniczne	0.75 kg (18.1%)	--- %	4
Grain	płatki owsiane	0.4 kg (9.6%)	--- %	3.5

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Amarillo (USA)	20 g	60 min	8.7 %
Boil	Amarillo (USA)	20 g	30 min	8.7 %
Aroma (end of boil)	Amarillo (USA)	10 g	0 min	8.7 %
Aroma (end of boil)	Cascade (USA)	20 g	0 min	7.1 %
Dry Hop	Cascade (USA)	60 g	2 day(s)	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM20 Białe Walonki	Wheat	Liquid	200 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Spice	Jałowiec	15 g	Boil	15 min
Spice	Zest z pomarańczy	15 g	Boil	15 min
Spice	Kolendra	20 g	Boil	15 min