

# Bitter#1resztkowy

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **9.8**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **26.5 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **20.6 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **0 min** at **76C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (50.8%)	80 %	2
Grain	Pszeniczny	0.5 kg (8.5%)	85 %	4
Grain	Biscuit Malt	0.3 kg (5.1%)	79 %	45
Grain	Strzegom Karmel 150	0.6 kg (10.2%)	75 %	150
Grain	Weyermann Monachiski I	1 kg (16.9%)	80 %	16
Grain	Płatki owsiane błyskawiczne	0.5 kg (8.5%)	60 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	40 g	60 min	6.1 %
Boil	Challenger	20 g	25 min	6.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
s - 04	Ale	Dry	11.5 g	safale

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	4 g	Mash	70 min
Fining	mech irlandzki	5 g	Boil	15 min