

# No to hops reszta do gara

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **33**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

## Mash information

- Mash efficiency **62 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.1 liter(s)**
- Total mash volume **12.1 liter(s)**

## Steps

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

## Mash step by step

- Heat up **9.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1 kg (33.1%)	80 %	5
Grain	Strzegom Pilzneński	1 kg (33.1%)	80 %	4
Grain	Płatki owsiane	0.4 kg (13.2%)	85 %	3
Grain	Pszeniczny	0.5 kg (16.6%)	85 %	4
Grain	Płatki żytnie	0.1 kg (3.3%)	85 %	3
Grain	Strzegom Karmel 300	0.02 kg (0.7%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	45 min	8.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
fm 21	Ale	Slant	100 ml	FM

## Extras

Type	Name	Amount	Use for	Time
Water Agent	mech	5 g	Boil	10 min
Water Agent	Gips	2 g	Mash	60 min

## Notes

- Zeszło do 1 BLG  
Złanie 65 g glukozy - 2018-11-15  
*Nov 16, 2018, 11:06 AM*