

# Zmiotki po Piwowarach

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **182**
- SRM **4.2**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **10.4 liter(s)**
- Total mash volume **13 liter(s)**

## Steps

- Temp **55 C**, Time **10 min**
- Temp **62 C**, Time **20 min**
- Temp **68 C**, Time **30 min**

## Mash step by step

- Heat up **10.4 liter(s)** of strike water to **59.4C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **20 min** at **62C**
- Keep mash **30 min** at **68C**
- Sparge using **4.9 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (76.6%)	80 %	5
Grain	Viking Pilsner malt	0.29 kg (11.1%)	82 %	4
Grain	Viking Wheat Malt	0.32 kg (12.3%)	83 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	60 min	11 %
Boil	Citra	10 g	60 min	12 %
Boil	Cascade	30 g	40 min	6.9 %
Boil	lunga	10 g	40 min	11 %
Boil	Citra	40 g	10 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Liquid	35 ml	Fermentum Mobile