

# Pils

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **32**
- SRM **4.7**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **3 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.5 liter(s)**

## Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

## Steps

- Temp **62 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **78C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (46.5%)	80 %	5
Grain	Pszeniczny	1 kg (23.3%)	85 %	4
Grain	Strzegom Wiedeński	1 kg (23.3%)	79 %	10
Grain	Karmelowy Jasny 30EBC	0.3 kg (7%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	9.5 %
Whirlpool	Marynka	30 g	30 min	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
w34/70	Lager	Slant	150 ml	Fermentis

## Notes

- Fermentacja 10C  
Whirpol 77C - 30min  
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