

## Pils nowofalowy

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **40**
- SRM **3.7**
- Style **Classic American Pilsner**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **40 C**, Time **64 min**
- Temp **30 C**, Time **72 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **31.4C**
- Add grains
- Keep mash **72 min** at **30C**
- Keep mash **64 min** at **40C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4.4 kg (88%)	82 %	4
Grain	Pszeniczny	0.3 kg (6%)	85 %	4
Grain	Weyermann - Carapils	0.3 kg (6%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	15 g	50 min	14.3 %
Aroma (end of boil)	Amarillo	20 g	10 min	9.5 %
Aroma (end of boil)	Ahtanum	20 g	10 min	13.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Slant	230 ml	Fermentum Mobile