

# pils nowofalowy receptura konkursowa

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **4.1**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **3 %**
- Size with trub loss **61.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **69.3 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **39 liter(s)**
- Total mash volume **52 liter(s)**

## Steps

- Temp **50 C**, Time **1 min**
- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **39 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **1 min** at **50C**
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **43.3 liter(s)** of **76C** water or to achieve **69.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	11.5 kg (88.5%)	82 %	3.5
Grain	Cara Ruby Castle	0.5 kg (3.8%)	72 %	49
Grain	Weyermann pszeniczny jasny	1 kg (7.7%)	80 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	50 min	10.3 %
Aroma (end of boil)	Centennial	50 g	15 min	8.4 %
Aroma (end of boil)	Centennial	50 g	5 min	8.4 %
Whirlpool	x09	50 g	30 min	15.3 %