

## Pils Niemiecki 2

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **43**
- SRM **4**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **3 %**
- Size with trub loss **23.7 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **28.5 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **35 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **35 min** at **72C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód pilzneński	4.5 kg (90%)	80 %	4
Grain	Monachijski	0.5 kg (10%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	50 g	60 min	4 %
Boil	Saaz (Czech Republic)	30 g	60 min	4 %
Boil	Hersbrucker	30 g	20 min	4.5 %
Aroma (end of boil)	Hersbrucker	14 g	0 min	3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM30 Bohemska rapsodia	Lager	Liquid	2000 ml	Fermentum Mobile