

Pilzner Niemiecki

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **31**
- SRM **3.8**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **12.1 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.7 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **15.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **6.15 liter(s) / kg**
- Mash size **18.5 liter(s)**
- Total mash volume **21.5 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18.5 liter(s)** of strike water to **57.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **liter(s)** of **76C** water or to achieve **15.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.7 kg (90%)	81 %	4
Grain	Strzegom Wiedeński	0.2 kg (6.7%)	79 %	10
Grain	Briess - Carapils Malt	0.1 kg (3.3%)	74 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertauer Taurus	5 g	60 min	15.8 %
Boil	Hersbrucker	5 g	30 min	4.3 %
Boil	Tettnanger	5 g	30 min	3.8 %
Boil	Hersbrucker	10 g	15 min	4.3 %
Boil	Tettnanger	10 g	15 min	3.8 %
Boil	Hersbrucker	10 g	5 min	4.3 %
Boil	Tettnanger	10 g	5 min	3.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Wyeast - Munich Lager	Lager	Liquid	1600 ml	Wyeast
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Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	4 g	Boil	15 min