

# Niemiecki Księżcunio

- Gravity **12.1 BLG**
- ABV ---
- IBU **28**
- SRM **9**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

## Steps

- Temp **64 C**, Time **70 min**
- Temp **74 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **15.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **70 min** at **64C**
- Keep mash **20 min** at **74C**
- Keep mash **0 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszonieczny Heidenberg	2.5 kg (48.5%)	82 %	3
Grain	Strzegom Pilzneński	2.5 kg (48.5%)	80 %	4
Grain	Strzegom Karmel 300	0.15 kg (2.9%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Huell Melon	20 g	15 min	7.5 %
Aroma (end of boil)	Yellow Sub	20 g	15 min	7.3 %
Aroma (end of boil)	Mandarina Bavaria	20 g	15 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
W34/70	Lager	Dry	20 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Fining	Mech Irlandzki	5 g	Boil	15 min
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