

German Pils

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **3**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **0 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **52 C**, Time **5 min**
- Temp **64 C**, Time **25 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17 liter(s)** of strike water to **56.7C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **25 min** at **64C**
- Keep mash **30 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann Premium Pilsner Malt	5 kg (100%)	80.5 %	2.75

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum PL 2023	20 g	60 min	11 %
Boil	Tettnanger DE 2023	20 g	30 min	3.2 %
Boil	Hallertauer Mittelfruh DE 2023	20 g	15 min	4.8 %
Aroma (end of boil)	Tettnanger DE 2023	10 g	5 min	3.2 %
Aroma (end of boil)	Hallertauer Mittelfruh DE 2023	10 g	5 min	4.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis Saflager W34/70	Lager	Dry	23 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Water Agent	Kwas Mlekowy 80%	5 g	Mash	---
Other	Witamina C	5 g	Primary	---
Other	Łuska Ryżowa	50 g	Mash	---
Fining	Whirlfloc T	1.25 g	Boil	10 min