

Keller Märzen

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **25**
- SRM **6.1**
- Style **Dortmunder Export**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **15 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **6 %/h**
- Boil size **20.1 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.1 liter(s)**

Steps

- Temp **55 C**, Time **5 min**
- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **50 min** at **63C**
- Keep mash **10 min** at **72C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **20.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner	2.2 kg (57.9%)	80.5 %	4
Grain	Pale Ale Best	1 kg (26.3%)	80 %	6
Grain	Carared	0.3 kg (7.9%)	75 %	39
Grain	Melanoidin BESTMALZ	0.2 kg (5.3%)	75 %	71
Grain	Rauch Malz Best	0.1 kg (2.6%)	77 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	10 g	60 min	9.7 %
Boil	Spalt	30 g	15 min	5 %
Aroma (end of boil)	Spalt	10 g	5 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - 2206 Bavarian Lager	Lager	Liquid	300 ml	Wyeast Labs