

## Märzen 2

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **24**
- SRM **5.9**
- Style **Oktoberfest/Märzen**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **15 %**
- Size with trub loss **19.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **6 %/h**
- Boil size **22.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **21.6 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **16.8 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner	4 kg (83.2%)	80.5 %	4
Grain	Münchner Malz Best	0.5 kg (10.4%)	78 %	20
Grain	Carapils Best	0.1 kg (2.1%)	75 %	5
Grain	Cara aroma (red)	0.1 kg (2.1%)	78 %	50
Grain	Sauermalz	0.1 kg (2.1%)	--- %	4
Grain	Carafa II Best	0.01 kg (0.2%)	65 %	1100

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	10 g	60 min	9.7 %
Boil	Marynka	20 g	15 min	9.1 %
Aroma (end of boil)	Lubelski	20 g	5 min	5.7 %

### Yeasts

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