

# Rauchbier Märzen

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **19**
- SRM **10.8**
- Style **Oktoberfest/Märzen**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **20 min**
- Temp **100 C**, Time **60 min**

## Mash step by step

- Heat up **17.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **20 min** at **78C**
- Keep mash **60 min** at **100C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	3.1 kg (54.4%)	80 %	16
Grain	Viking Wędzony bukiem	2.5 kg (43.9%)	82 %	10
Grain	Strzegom Karmel 600	0.1 kg (1.8%)	68 %	601

## Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Hallertau Tradition	30 g	30 min	5.6 %
Boil	Hallertau Blanc	13 g	40 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
lalbrew lager yeast	Lager	Dry	11 g	lallemand