

Marcowe

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **5.6**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.8 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **79 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **18.9 liter(s)**

Steps

- Temp **53 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **58.2C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Weyermann - Pilsner Malt | 3.2 kg (71.1%) | 82 % | 5 |
| Grain | Monachijski typ I Weyermann | 0.8 kg (17.8%) | 79 % | 16 |
| Grain | Weyermann - Carapils | 0.3 kg (6.7%) | 78 % | 4 |
| Grain | Caramunich® typ I | 0.2 kg (4.4%) | 73 % | 80 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------------------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 8.1 % |
| Boil | Hallertau Tradition | 10 g | 60 min | 4.2 % |
| Boil | Hallertau Tradition | 20 g | 15 min | 4.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------|-------|------|--------|------------|
| Saflager S-189 | Lager | Dry | 11.5 g | Fermentis |