

Marcowe

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **14**
- SRM **6.6**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **24.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.7 liter(s)**
- Total mash volume **27.9 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **7 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **21.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **7 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 2 kg (32.3%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 2 kg (32.3%) | 79 % | 10 |
| Grain | Strzegom Monachijski typ II | 1 kg (16.1%) | 79 % | 22 |
| Grain | Strzegom Pszeniczny | 0.7 kg (11.3%) | 81 % | 6 |
| Grain | Płatki owsiane | 0.5 kg (8.1%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Tettnang | 30 g | 40 min | 4 % |
| Boil | Tettnang | 20 g | 10 min | 4 % |
| Aroma (end of boil) | Marynka | 10 g | 1 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------|------|--------|------------|
| saflager s-33 | Lager | Dry | 11 g | fermentis |