

Marcowe 2017 ****

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **27**
- SRM **6.6**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **90 min**
- Evaporation rate **6 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2.96 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **26.7 liter(s)**

Steps

- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **72C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|----------------|--------|-----|
| Grain | Pilzneński Optima | 5 kg (74.1%) | 80.5 % | 4 |
| Grain | Wiedeński Optima | 1 kg (14.8%) | 79.2 % | 9 |
| Grain | Pszeniczny Weyermann | 0.25 kg (3.7%) | 82 % | 4 |
| Grain | Karmelowy jasny 40-60 Optima | 0.5 kg (7.4%) | 75.3 % | 60 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | lunga granulát | 15 g | 30 min | 12.9 % |
| Boil | Oktawia granulát | 15 g | 20 min | 7.8 % |
| Boil | Marynka granulát | 15 g | 10 min | 7.7 % |
| Boil | Lubelski granulát | 30 g | 1 min | 3.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------|-------|-------|--------|------------|
| Saflager W-34/70 | Lager | Slant | 500 ml | Fermentis |