

Marcowe02

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **31**
- SRM **4.2**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **21.1 liter(s)**
- Total mash volume **27.5 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **21.1 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Pilzneński/ Pale ale | 5 kg (78.1%) | 80 % | 4 |
| Grain | Płatki owsiane | 0.4 kg (6.3%) | 85 % | 3 |
| Grain | Viking Wędzony torfem | 1 kg (15.6%) | 81 % | 7 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | cascade (szyszka) | 60 g | 60 min | 4.8 % |
| Boil | cascade (szyszka) | 40 g | 10 min | 4.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale | Dry | 11.5 g | safale |