

Marcowe

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **28**
- SRM **11.7**
- Style **Oktoberfest/Märzen**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **90 min**
- Evaporation rate **7 %/h**
- Boil size **32.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **16.7 liter(s)**
- Total mash volume **22.9 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **20 min**
- Temp **65 C**, Time **10 min**
- Temp **66 C**, Time **10 min**
- Temp **68 C**, Time **10 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **1 min**

Mash step by step

- Heat up **16.7 liter(s)** of strike water to **57.9C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **64C**
- Keep mash **10 min** at **65C**
- Keep mash **10 min** at **66C**
- Keep mash **10 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **21.9 liter(s)** of **76C** water or to achieve **32.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Vikking Red Active | 4.5 kg (72.6%) | 80 % | 35 |
| Grain | Viking Pale Ale malt | 1.6 kg (25.8%) | 80 % | 5 |
| Grain | Strzegom Karmel 150 | 0.1 kg (1.6%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil | Magnat | 25 g | 60 min | 11.2 % |
| Boil | Saaz (Czech Republic) | 20 g | 20 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|--------|-------|-------|--------|-----|
| W70/34 | Lager | Slant | 250 ml | --- |
|--------|-------|-------|--------|-----|