

imp

- Gravity **24.9 BLG**
- ABV **11.6 %**
- IBU **40**
- SRM **36.8**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **21.9 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **23 liter(s)**
- Total mash volume **32.2 liter(s)**

Steps

- Temp **52 C**, Time **5 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **23 liter(s)** of strike water to **58.4C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **21.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt | 7 kg (76.1%) | 80 % | 5 |
| Grain | Caraaroma | 1 kg (10.9%) | 78 % | 400 |
| Grain | Carafa II | 0.2 kg (2.2%) | 70 % | 1100 |
| Grain | Płatki owsiane | 1 kg (10.9%) | 100 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 50 g | 60 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 50 g | 0 min | 2.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 500 ml | Safale |