

RIS

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **90**
- SRM **28**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **30 liter(s)**
- Total mash volume **40 liter(s)**

Steps

- Temp **50 C**, Time **15 min**
- Temp **67 C**, Time **60 min**
- Temp **79 C**, Time **5 min**

Mash step by step

- Heat up **30 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **79C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|--------------|-------|-----|
| Grain | Viking Vienna Malt | 3.5 kg (35%) | 79 % | 7 |
| Grain | Viking Munich Malt | 3.5 kg (35%) | 78 % | 18 |
| Grain | Fawcett - Pale Chocolate | 1 kg (10%) | 71 % | 600 |
| Grain | Viking Caramel 30 Malt | 1 kg (10%) | 75 % | 30 |
| Grain | Strzegom Karmel 150 | 0.4 kg (4%) | 70 % | 150 |
| Grain | Płatki pszeniczne | 0.2 kg (2%) | 60 % | 3 |
| Grain | Płatki pszeniczne | 0.2 kg (2%) | 60 % | 3 |
| Grain | Płatki owsiane | 0.2 kg (2%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Marynka | 120 g | 60 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 90 g | 10 min | 4 % |

Yeasts

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

| | | | | |
|-------------|-----|-----|--------|-----------|
| Safale S-04 | Ale | Dry | 34.5 g | Fermentis |
|-------------|-----|-----|--------|-----------|