

Full Aroma Hops

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **35**
- SRM **3.2**

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 **10 %/h**
- Boil size **33.1 liter(s)**

Mash information

- Mash efficiency **86.2 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21 liter(s)**

Steps

- Temp **60 C**, Time **10 min**
- Temp **70 C**, Time **45 min**
- Temp **10 C**, Time **75 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **8.4C**
- Add grains
- Keep mash **75 min** at **10C**
- Keep mash **10 min** at **60C**
- Keep mash **45 min** at **70C**
- Sparge using **22.1 liter(s)** of **76C** water or to achieve **33.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|-------------|-------|-----|
| Grain | Pilzneński | 5 kg (100%) | 81 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|----------|------------|
| Boil | Marynka | 45 g | 90 min | 6.8 % |
| Boil | Lublin (Lubelski) | 20 g | 30 min | 2.8 % |
| Boil | Lublin (Lubelski) | 20 g | 10 min | 2.8 % |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g | 0 min | 2.8 % |
| Dry Hop | Marynka | 15 g | 3 day(s) | 6.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11.5 g | Safale |