

Ale

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **43**
- SRM **5.8**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **6 %**
- Size with trub loss **20.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **14 %/h**
- Boil size **26.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **71 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **71C**
- Keep mash **1 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 4 kg (88.9%) | 80 % | 4 |
| Grain | Karmelowy Czerwony | 0.5 kg (11.1%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|----------|------------|
| Boil | Marynka | 35 g | 50 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 20 g | 10 min | 4 % |
| Dry Hop | Lublin (Lubelski) | 20 g | 5 day(s) | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Fining | Mech Irlandzki | 5 g | Boil | 15 min |