

polskie ale

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **45**
- SRM **3.5**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **27.8 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 |
|---------------------|-------------------|--------|----------|------------|
| Mash | Marynka | 25 g | 60 min | 10 % |
| Mash | Lublin (Lubelski) | 25 g | 60 min | 4 % |
| Boil | Marynka | 15 g | 60 min | 10 % |
| Boil | Marynka | 35 g | 30 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 15 g | 10 min | 4 % |
| Aroma (end of boil) | Lublin (Lubelski) | 35 g | 0 min | 4 % |
| Dry Hop | Marynka | 25 g | 4 day(s) | 10 % |
| Dry Hop | Lublin (Lubelski) | 25 g | 4 day(s) | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 10 g | Fermentis |
| gestwa z poprzedniego piwa | | | | |