

lager na wiosne

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **59**
- SRM **7.5**
- Style **Premium American Lager**

Batch size

- Expected quantity of finished beer **76 liter(s)**
- Trub loss **5 %**
- Size with trub loss **79.8 liter(s)**
- Boil time **120 min**
- Evaporation rate **5 %/h**
- Boil size **92 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **63.6 liter(s)**
- Total mash volume **84.8 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **40 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **63.6 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **40 min** at **73C**
- Keep mash **2 min** at **78C**
- Sparge using **49.6 liter(s)** of **76C** water or to achieve **92 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------|-----------------|-------|-----|
| Grain | Weyermann - Vienna Malt | 13.2 kg (62.3%) | 81 % | 8 |
| Grain | Munich Malt | 8 kg (37.7%) | 80 % | 18 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil | Equinox | 60 g | 35 min | 13.4 % |
| Boil | Citra | 30 g | 20 min | 14.2 % |
| Boil | Columbus/Tomahawk/Zeus | 30 g | 30 min | 15 % |
| Boil | Centennial | 30 g | 75 min | 9.7 % |
| Boil | Perle | 30 g | 80 min | 7.1 % |
| Boil | Marynka | 30 g | 50 min | 7.5 % |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g | 90 min | 3.4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------|-------|------|--------|------------|
| Saflager S-189 | Lager | Dry | 46 g | Saflager |