

Lager lutowy

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU ---
- SRM **4**
- Style **Bohemian Pilsener**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **54 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **10 min** at **54C**
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 4.5 kg (91.8%) | 80 % | 4 |
| Grain | Weyermann - Carapils | 0.3 kg (6.1%) | 78 % | 4 |
| Grain | Weyermann - Caraamber | 0.1 kg (2%) | 75 % | 65 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Mash | Marynka | 30 g | 70 min | 10 % |
| Mash | Lublin (Lubelski) | 30 g | 20 min | 4 % |
| Aroma (end of boil) | Saaz (Czech Republic) | 30 g | 0 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Safale |