

Lager#1

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **44**
- SRM **4.6**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **14.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------------|---------------|-------|-----|
| Grain | Weyermann - Bohemian Pilsner Malt | 4 kg (85.1%) | 81 % | 4 |
| Grain | Weyermann - Carapils | 0.4 kg (8.5%) | 78 % | 4 |
| Grain | Strzegom Monachijski typ I | 0.3 kg (6.4%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 10 g | 30 min | 6.7 % |
| Boil | Marynka | 10 g | 45 min | 6.7 % |
| Boil | Marynka | 20 g | 50 min | 6.7 % |
| Boil | Sybilla | 15 g | 15 min | 6.2 % |
| Boil | Sybilla | 20 g | 5 min | 6.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------|------|--------|------------|
| Saflager S-23 | Lager | Dry | 11.5 g | Fermentis |

Extras

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