

Roggenbier I

- Gravity **11.9 BLG**
- ABV ---
- IBU **14**
- SRM **8.4**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **30 %/h**
- Boil size **15.6 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.4 liter(s)**
- Total mash volume **11.2 liter(s)**

Steps

- Temp **45 C**, Time **20 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **8.4 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **10 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pilsneński | 1.2 kg (42.9%) | 80 % | 4 |
| Grain | Weyermann - Żytni | 0.8 kg (28.6%) | 85 % | 8 |
| Grain | Weyermann - Monachijski I | 0.5 kg (17.9%) | 80 % | 16 |
| Grain | Weyermann - CaraHell | 0.3 kg (10.7%) | 74 % | 25 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------|--------|--------|------------|
| Boil | PL Lubelski | 15 g | 60 min | 3.6 % |
| Boil | PL Lubelski | 10 g | 5 min | 3.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------|-------|--------|--------|------------------|
| FM40 Pszeniczny Łan | Wheat | Liquid | 100 ml | Fermentum Mobile |