

roggenbier

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **15**
- SRM **18.8**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **62 C**, Time **40 min**
- Temp **64 C**, Time **20 min**
- Temp **79 C**, Time **2 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **64C**
- Keep mash **2 min** at **79C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|---------------|-------|------|
| Grain | Żytni | 3 kg (56.6%) | 85 % | 8 |
| Grain | Strzegom Monachijski typ II | 1 kg (18.9%) | 79 % | 22 |
| Grain | Strzegom Pilzneński | 1 kg (18.9%) | 80 % | 4 |
| Grain | Słód Caramunich Typ II Weyermann | 0.1 kg (1.9%) | 73 % | 120 |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (3.8%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil | Lomik | 30 g | 60 min | 3.8 % |
| Aroma (end of boil) | Lomik | 20 g | 10 min | 3.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------|-------|-------|--------|------------|
| Bawarian Wheat | Wheat | Slant | 100 ml | ja |