

Rogen #2

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **17**
- SRM **10.9**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **27.9 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **21.4 liter(s)** of strike water to **47.6C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Żytni | 2 kg (30.8%) | 85 % | 8 |
| Grain | Pszeniczny ciemny | 1 kg (15.4%) | 85 % | 14 |
| Grain | Monachijski | 3 kg (46.2%) | 80 % | 16 |
| Grain | Simpsons - Crystal Rye | 0.25 kg (3.8%) | 73 % | 200 |
| Grain | Melanoiden Malt | 0.25 kg (3.8%) | 80 % | 39 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Magnum | 11 g | 60 min | 12 % |
| Boil | Hallertau Spalt Select | 30 g | 15 min | 2.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------------|-------|--------|---------|------------------|
| FM41 Gwoździe i Banany | Wheat | Liquid | 1000 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------|-------|--------|---------|--------|
| Other | łuska | 250 g | Mash | 60 min |