

## ROGGENBIER 10

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **18**
- SRM **7.4**
- 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 **10 %/h**
- Boil size **13.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.3 liter(s)**
- Total mash volume **11 liter(s)**

### Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **79 C**, Time **1 min**

### Mash step by step

- Heat up **8.3 liter(s)** of strike water to **48C**
- 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 **79C**
- Sparge using **7.7 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

### Fermentables

| Type  | Name              | Amount         | Yield | EBC |
|-------|-------------------|----------------|-------|-----|
| Grain | Żytni             | 1.7 kg (61.8%) | 85 %  | 8   |
| Grain | Monachijski       | 0.5 kg (18.2%) | 80 %  | 16  |
| Grain | Pilzneński        | 0.4 kg (14.5%) | 81 %  | 4   |
| Grain | Caramunich® typ I | 0.15 kg (5.5%) | 73 %  | 80  |

### Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Hallertau Spalt Select | 15 g   | 60 min | 5.2 %      |
| Boil    | Hallertau Spalt Select | 5 g    | 15 min | 5.2 %      |