

## Kolonia?

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **32**
- SRM **2.8**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

### Steps

- Temp **52 C**, Time **20 min**
- Temp **68 C**, Time **90 min**

### Mash step by step

- Heat up **16.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **90 min** at **68C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount        | Yield  | EBC |
|-------|----------------------|---------------|--------|-----|
| Grain | Briess - Pilsen Malt | 5 kg (89.3%)  | 80.5 % | 2   |
| Grain | Barley, Flaked       | 0.4 kg (7.1%) | 70 %   | 4   |
| Grain | Wheat, Flaked        | 0.2 kg (3.6%) | 77 %   | 4   |

### Hops

| Use for | Name         | Amount | Time   | Alpha acid |
|---------|--------------|--------|--------|------------|
| Boil    | opal DE 2016 | 50 g   | 40 min | 7.4 %      |

### Yeasts

| Name | Type | Form  | Amount | Laboratory |
|------|------|-------|--------|------------|
| s04  | Ale  | Slant | 100 ml | ---        |