

#221 Koelsch

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **20**
- SRM **3.2**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **6 %**
- Size with trub loss **23.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **25.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.38 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.2 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **56.7C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **25.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------|---------------|-------|-----|
| Grain | VM pilzneński | 3.65 kg (88%) | 81 % | 4 |
| Grain | VM pszeniczny | 0.5 kg (12%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------|--------|--------|------------|
| Boil | Lubelski PL 2023 | 35 g | 60 min | 4.3 % |
| Aroma (end of boil) | Lubelski PL 2022 | 15 g | 10 min | 4.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------|------|--------|--------|------------------|
| FM704 Lutra kveik | Ale | Liquid | 40 ml | Fermentum Mobile |