

Kolsh

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **25**
- SRM **3.5**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **3 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **45 C**, Time **1 min**
- Temp **52 C**, Time **10 min**
- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **18.2 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **1 min** at **45C**
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 4.6 kg (88.5%) | 80 % | 4 |
| Grain | Pszeniczny | 0.2 kg (3.8%) | 85 % | 4 |
| Grain | Płatki pszeniczne | 0.4 kg (7.7%) | 80 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 15 g | 15 min | 11.5 % |
| Boil | lunga | 13 g | 60 min | 11.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|--------|--------|------------------|
| FM42 Stare Nadreńskie | Ale | Liquid | 45 ml | Fermentum Mobile |