

Bez Niemca ;-)

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **22**
- SRM **3.4**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 4.5 kg (81.8%) | 80 % | 3.8 |
| Grain | Strzegom pszeniczny | 1 kg (18.2%) | 81 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------------------------|--------|--------|------------|
| Boil | marynka 2021 2021 2021 | 20 g | 60 min | 8.6 % |
| Boil | Żatecki 2021 2021 2021 | 50 g | 10 min | 3.74 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------------------------|-------|--------|--------|------------------|
| FM50 Kłosy Kansas 2022 2022 2022 | Wheat | Liquid | 150 ml | Fermentum Mobile |