

#122 Cosie stałosie?

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **23**
- SRM **3.4**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **22.7 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3.333 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **16.9 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **75.6 C**, Time **5 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **56.8C**
- 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 **75.6C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **22.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|-----------------|-------|-----|
| Grain | Viking Malt Pszeniczny | 0.45 kg (11.5%) | 81 % | 6 |
| Grain | Viking Malt Pilzneński | 3.45 kg (88.5%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------------------------|--------|--------|------------|
| Boil | Lubelski PL 2020 granulat | 30 g | 60 min | 5.4 % |
| Aroma (end of boil) | Lubelski PL 2020 granulat | 10 g | 10 min | 5.4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|--------|--------|------------------|
| FM42 Stare Nadreńskie | Ale | Liquid | 30 ml | Fermentum Mobile |