

## #157 Niedokończony sen

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **13**
- SRM **2.5**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **21.1 liter(s)**
- Trub loss **6 %**
- Size with trub loss **22.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **24 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.333 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **17.9 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 **13.8 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 **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

### Fermentables

| Type  | Name                            | Amount          | Yield | EBC |
|-------|---------------------------------|-----------------|-------|-----|
| Grain | Weyermann<br>pilsneński premium | 3.63 kg (87.9%) | 81 %  | 2   |
| Grain | Steinbach<br>pszeniczny         | 0.5 kg (12.1%)  | 81 %  | 4   |

### Hops

| Use for             | Name                         | Amount | Time   | Alpha acid |
|---------------------|------------------------------|--------|--------|------------|
| Boil                | Lubelski PL 2021<br>granulat | 30 g   | 60 min | 3 %        |
| Aroma (end of boil) | Lubelski PL 2021<br>granulat | 20 g   | 10 min | 3 %        |

### Yeasts

| Name                     | Type | Form   | Amount | Laboratory       |
|--------------------------|------|--------|--------|------------------|
| FM42 Stare<br>Nadreńskie | Ale  | Liquid | 40 ml  | Fermentum Mobile |