

## Trzy słody

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **19**
- SRM **5.2**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **2 %**
- Size with trub loss **12.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **15.8 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **12.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **16.8 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Rahr - Premium Pilsner Malt | 2 kg (57.1%)   | 80 %  | 4   |
| Grain | Strzegom Monachijski typ I  | 0.6 kg (17.1%) | 79 %  | 16  |
| Grain | Strzegom Wiedeński          | 0.6 kg (17.1%) | 79 %  | 10  |
| Grain | Weyermann - Carapils        | 0.3 kg (8.6%)  | 78 %  | 4   |

### Hops

| Use for             | Name                  | Amount | Time     | Alpha acid |
|---------------------|-----------------------|--------|----------|------------|
| Boil                | lunga                 | 10 g   | 50 min   | 11 %       |
| Aroma (end of boil) | Saaz (Czech Republic) | 7 g    | 5 min    | 4.5 %      |
| Aroma (end of boil) | Sybilla               | 7.5 g  | 5 min    | 3.5 %      |
| Dry Hop             | Saaz (Czech Republic) | 10 g   | 5 day(s) | 4.5 %      |
| Dry Hop             | Sybilla               | 10 g   | 5 day(s) | 3.5 %      |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|             |     |     |        |           |
|-------------|-----|-----|--------|-----------|
| Safale S-04 | Ale | Dry | 11.5 g | Fermentis |
|-------------|-----|-----|--------|-----------|