

## Felek 4

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **24**
- SRM **8.6**
- Style **Belgian Pale Ale**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **83.6 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.4 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **21 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Wiedeński          | 2.5 kg (46.7%) | 79 %  | 10  |
| Grain | Strzegom Pilzneński         | 2.5 kg (46.7%) | 80 %  | 4   |
| Grain | Special B Castle            | 0.2 kg (3.7%)  | 70 %  | 350 |
| Grain | Weyermann - Acidulated Malt | 0.15 kg (2.8%) | 80 %  | 6   |

### Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | lunga             | 20 g   | 60 min | 11 %       |
| Boil    | Lublin (Lubelski) | 20 g   | 15 min | 4 %        |