

## Pils nowofalowy

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **40**
- SRM **3.7**
- Style **Classic American Pilsner**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

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

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **31.4C**
- Add grains
- Keep mash **72 min** at **30C**
- Keep mash **64 min** at **40C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount       | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pilsner malt  | 4.4 kg (88%) | 82 %  | 4   |
| Grain | Pszeniczny           | 0.3 kg (6%)  | 85 %  | 4   |
| Grain | Weyermann - Carapils | 0.3 kg (6%)  | 78 %  | 4   |

### Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Summit   | 15 g   | 50 min | 14.3 %     |
| Aroma (end of boil) | Amarillo | 20 g   | 10 min | 9.5 %      |
| Aroma (end of boil) | Ahtanum  | 20 g   | 10 min | 13.1 %     |

### Yeasts

| Name                 | Type  | Form  | Amount | Laboratory       |
|----------------------|-------|-------|--------|------------------|
| FM31 Bawarska Dolina | Lager | Slant | 230 ml | Fermentum Mobile |