

## Nowofalowy pils

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **45**
- SRM **5.3**
- Style **Classic American Pilsner**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **34.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **50 C**, Time **15 min**
- Temp **62 C**, Time **75 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **75 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **22.6 liter(s)** of **76C** water or to achieve **34.6 liter(s)** of wort

### Fermentables

| Type  | Name                     | Amount       | Yield | EBC |
|-------|--------------------------|--------------|-------|-----|
| Grain | Strzegom Pilzneński      | 5 kg (83.3%) | 80 %  | 4   |
| Grain | Karmelowy Jasny<br>30EBC | 1 kg (16.7%) | 75 %  | 30  |

### Hops

| Use for             | Name    | Amount | Time      | Alpha acid |
|---------------------|---------|--------|-----------|------------|
| Boil                | Marynka | 33 g   | 50 min    | 8 %        |
| Aroma (end of boil) | Topaz   | 30 g   | 12 min    | 15 %       |
| Whirlpool           | Citra   | 25 g   | 5 min     | 12 %       |
| Whirlpool           | Topaz   | 20 g   | 5 min     | 15 %       |
| Dry Hop             | Topaz   | 25 g   | 14 day(s) | 15 %       |
| Dry Hop             | Citra   | 25 g   | 14 day(s) | 12 %       |

### Yeasts

| Name                   | Type  | Form   | Amount | Laboratory       |
|------------------------|-------|--------|--------|------------------|
| FM30 Bohemska rapsodia | Lager | Liquid | 300 ml | Fermentum Mobile |