

# pils nowofalowy receptura konkursowa

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **4.1**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **3 %**
- Size with trub loss **61.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **69.3 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **39 liter(s)**
- Total mash volume **52 liter(s)**

## Steps

- Temp **50 C**, Time **1 min**
- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **39 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **1 min** at **50C**
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **43.3 liter(s)** of **76C** water or to achieve **69.3 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount          | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Viking Pilsner malt        | 11.5 kg (88.5%) | 82 %  | 3.5 |
| Grain | Cara Ruby Castle           | 0.5 kg (3.8%)   | 72 %  | 49  |
| Grain | Weyermann pszeniczny jasny | 1 kg (7.7%)     | 80 %  | 6   |

## Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | lunga      | 30 g   | 50 min | 10.3 %     |
| Aroma (end of boil) | Centennial | 50 g   | 15 min | 8.4 %      |
| Aroma (end of boil) | Centennial | 50 g   | 5 min  | 8.4 %      |
| Whirlpool           | x09        | 50 g   | 30 min | 15.3 %     |