

## Cascade pils

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **32**
- SRM **3.9**
- Style **Classic American Pilsner**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.5 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **32 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **20.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **32 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount        | Yield | EBC |
|-------|-----------------------|---------------|-------|-----|
| Grain | Pilzneński            | 6 kg (88.2%)  | 81 %  | 4   |
| Grain | Płatki pszeniczne     | 0.4 kg (5.9%) | 85 %  | 3   |
| Grain | Jęczmień niesłodowany | 0.4 kg (5.9%) | 75 %  | 2   |

### Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Cascade | 20 g   | 30 min | 6 %        |
| Aroma (end of boil) | Cascade | 30 g   | 15 min | 6 %        |
| Boil                | Marynka | 20 g   | 60 min | 10 %       |

### Yeasts

| Name     | Type | Form | Amount | Laboratory |
|----------|------|------|--------|------------|
| Brewgo-2 | Ale  | Dry  | 14 g   | Browin     |