

## Pale ale 3

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **5.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **19.8 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **68 C**, Time **30 min**
- Temp **73 C**, Time **10 min**

### Mash step by step

- Heat up **15.3 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **68C**
- Keep mash **10 min** at **73C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

| Type  | Name               | Amount         | Yield | EBC |
|-------|--------------------|----------------|-------|-----|
| Grain | Pale Ale           | 3 kg (66.7%)   | 80 %  | 5   |
| Grain | Pszeniczny         | 0.7 kg (15.6%) | 82 %  | 4   |
| Grain | Monachijski typ II | 0.5 kg (11.1%) | 79 %  | 22  |
| Grain | Cookie Viking Malt | 0.3 kg (6.7%)  | 75 %  | 50  |

### Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Citra    | 10 g   | 50 min | 13.5 %     |
| Aroma (end of boil) | Citra    | 30 g   | 7 min  | 13.3 %     |
| Aroma (end of boil) | Amarillo | 20 g   | 5 min  | 9.5 %      |

### Yeasts

| Name                 | Type | Form  | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale  | Slant | 200 ml | ---        |

### Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

|             |                                 |     |      |        |
|-------------|---------------------------------|-----|------|--------|
| Fining      | Whirlfloc T                     | 1 g | Boil | 5 min  |
| Water Agent | Siarczan magnezu -<br>Sól Epsom | 2 g | Mash | 70 min |