

## Przebudzenie wiosny

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **26**
- SRM **7.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **40 min**

### Mash step by step

- Heat up **24 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **40 min** at **78C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount     | Yield | EBC |
|-------|---------------------|------------|-------|-----|
| Grain | Viking Pilsner malt | 4 kg (50%) | 82 %  | 4   |
| Grain | Viking Munich Malt  | 4 kg (50%) | 78 %  | 18  |

### Hops

| Use for             | Name   | Amount | Time   | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Aroma (end of boil) | Mosaic | 30 g   | 15 min | 10 %       |
| Aroma (end of boil) | Citra  | 30 g   | 15 min | 12 %       |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |

### Extras

| Type        | Name         | Amount | Use for | Time   |
|-------------|--------------|--------|---------|--------|
| Water Agent | kwas mlekowy | 2 g    | Mash    | 60 min |