

## Pale Ale 20L Bez chmielenia na zimno

- Gravity **12.6 BLG**
- ABV ---
- IBU **51**
- SRM **5.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

| Type  | Name              | Amount      | Yield | EBC |
|-------|-------------------|-------------|-------|-----|
| Grain | Strzegom Pale Ale | 5 kg (100%) | 79 %  | 6   |

### Hops

| Use for             | Name  | Amount | Time   | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil                | Citra | 10 g   | 60 min | 13.5 %     |
| Aroma (end of boil) | Citra | 20 g   | 25 min | 13.5 %     |
| Aroma (end of boil) | Citra | 15 g   | 15 min | 13.5 %     |
| Aroma (end of boil) | Citra | 25 g   | 5 min  | 13.5 %     |
| Whirlpool           | Citra | 30 g   | 0 min  | 13.5 %     |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11.5 g | Fermentis  |