

## Brown chocolade

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **27**
- SRM **12.4**
- Style **Belgian Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield  | EBC |
|-------|---------------------------|----------------|--------|-----|
| Grain | Strzegom Czekoladowy 400  | 0.25 kg (4.6%) | 68 %   | 400 |
| Grain | Chit Malt                 | 0.06 kg (1.1%) | 50 %   | 2   |
| Grain | Strzegom Karmel 150       | 0.18 kg (3.3%) | 75 %   | 150 |
| Grain | Pilzneński                | 2 kg (36.4%)   | 81 %   | 3.8 |
| Grain | BESTMALZ - Bestt Pale Ale | 3 kg (54.6%)   | 80.5 % | 6   |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | celeia  | 33 g   | 70 min | 5.3 %      |
| Boil    | Marynka | 14 g   | 20 min | 8.7 %      |

### Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale  | Slant | 150 ml | Fermentis  |

### Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Flavor | cukier         | 50 g   | Mash    | ---    |
| Other  | łuska ryżowa   | 50 g   | Mash    | ---    |
| Fining | mech irlandzki | 4 g    | Boil    | 70 min |