

## BROWN ALE

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **34**
- SRM **17.8**
- Style **American Brown Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **25.2 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **19.6 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **76C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type  | Name                                        | Amount         | Yield | EBC  |
|-------|---------------------------------------------|----------------|-------|------|
| Grain | Słód pale ale Viking Malt (Strzegom)        | 4.3 kg (76.8%) | --- % | 5    |
| Grain | Słód Castle Malting - Château Crystal®      | 1 kg (17.9%)   | --- % | 150  |
| Grain | Słód karmelowy 200 - Viking Malt (Strzegom) | 0.2 kg (3.6%)  | --- % | 5    |
| Grain | Słód pszeniczny czekoladowy Weyermann®      | 0.1 kg (1.8%)  | --- % | 1050 |

### Hops

| Use for   | Name              | Amount | Time   | Alpha acid |
|-----------|-------------------|--------|--------|------------|
| Boil      | Columbus          | 15 g   | 60 min | 10.7 %     |
| Boil      | East Kent Golding | 15 g   | 15 min | 10.6 %     |
| Whirlpool | East Kent Golding | 30 g   | 20 min | 10.6 %     |

### Yeasts

| Name                  | Type | Form | Amount | Laboratory       |
|-----------------------|------|------|--------|------------------|
| Fermentis Safale S-04 | Ale  | Dry  | 23 g   | Fermentis Safale |

## Notes

- schłodzenie brzożki do temp. 16-17°C;  
fermentacja - temperatura piwa w głównej fazie fermentacji 17-18°C, dojrzewanie w temp. 19-20°C;  
rozlew - poziom nasycenia 1,8-1,9 vol.;  
refermentacja - 14 dni

profil wody (ppm): Ca 75-125; Mg 20; SO<sub>4</sub> 100-150; Cl 100-150; Alk. całkow. 75-125; RA 0-50

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