

Brązowy Porter

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **22**
- SRM **25**
- Style **Brown Porter**

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 **5 %/h**
- Boil size **24.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **24.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (66.7%) | 82 % | 5 |
| Grain | Amber Malt | 0.8 kg (13.3%) | 85 % | 120 |
| Grain | Caraaroma | 0.6 kg (10%) | 80 % | 400 |
| Grain | Pale Amber | 0.5 kg (8.3%) | 72 % | 70 |
| Grain | Weyermann - Chocolate Rye | 0.1 kg (1.7%) | 30 % | 493 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 10 g | 60 min | 4 % |
| Boil | Marynka | 10 g | 60 min | 10 % |
| Boil | Lublin (Lubelski) | 10 g | 20 min | 4 % |
| Boil | Marynka | 10 g | 20 min | 10 % |
| Boil | Marynka | 10 g | 0 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---|-------------|-------------|---------------|-------------------|
| Lallemand - Lalbrew London English-style | Ale | Dry | 11 g | Lallemand |