

Brown Porter (z kakaowcem)

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **12**
- SRM **31.8**
- Style **Brown Porter**

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 **27.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.1 liter(s)**
- Total mash volume **28.4 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.1 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **11.7 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | pale ale | 4.5 kg (71.4%) | 80 % | 22 |
| Grain | Strzegom Monachijski typ II | 1 kg (15.9%) | 79 % | 22 |
| Grain | cararoma | 0.2 kg (3.2%) | 80 % | 400 |
| Grain | pszeniczny czekol 800-1200 | 0.5 kg (7.9%) | 80 % | 800 |
| Grain | Carafa II | 0.1 kg (1.6%) | 70 % | 812 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 30 g | 60 min | 4 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|-----------------|-------|------|--------|
| Flavor | Ziarna kakaowca | 500 g | Boil | 10 min |
|--------|-----------------|-------|------|--------|