

Porter Angielski

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **25**
- SRM **29**
- Style **Brown Porter**

Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.6 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **29.3 liter(s)**

Steps

- Temp **52 C**, Time **15 min**
- Temp **69 C**, Time **75 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **75 min** at **69C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.5 kg (69.2%) | 80 % | 5 |
| Grain | Abbey Malt Weyermann | 0.5 kg (7.7%) | 75 % | 45 |
| Grain | Caramel/Crystal Malt - 120L | 0.5 kg (7.7%) | 72 % | 236 |
| Grain | Czekoladowy | 0.5 kg (7.7%) | 60 % | 788 |
| Grain | Słód Caramunich Typ II Weyermann | 0.5 kg (7.7%) | 73 % | 120 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 50 g | 60 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M36 Liberty Bell Ale | Ale | Dry | 11 g | Mangrove Jack's |