

## #7 Porter angielski

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **33**
- SRM **23.8**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **30 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount       | Yield | EBC |
|-------|---------------------|--------------|-------|-----|
| Grain | Strzegom pale ale   | 6.6 kg (88%) | 79 %  | 6   |
| Grain | Strzegom Karmel 300 | 0.6 kg (8%)  | 70 %  | 299 |
| Grain | Carafa II           | 0.15 kg (2%) | 70 %  | 812 |
| Grain | jęczmień            | 0.15 kg (2%) | 55 %  | 985 |

### Hops

| Use for | Name            | Amount | Time   | Alpha acid |
|---------|-----------------|--------|--------|------------|
| Boil    | Perle           | 45 g   | 60 min | 7 %        |
| Boil    | Styrian Golding | 22.5 g | 20 min | 3.6 %      |
| Boil    | Styrian Golding | 22.5 g | 10 min | 3.6 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Fermentis  |