

# porter

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **26**
- SRM **23.3**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **26.5 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.6 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount         | Yield  | EBC |
|-------|--------------------------------|----------------|--------|-----|
| Grain | Pale Ale Viking Malt           | 5 kg (84.9%)   | 80 %   | 7   |
| Grain | Strzegom Karmel 150            | 0.14 kg (2.4%) | 75 %   | 150 |
| Grain | Cafe CM                        | 0.25 kg (4.2%) | 75.5 % | 480 |
| Grain | Roasted Barley CM              | 0.25 kg (4.2%) | 55 %   | 985 |
| Grain | Brown Malt (British Chocolate) | 0.25 kg (4.2%) | 70 %   | 128 |

## Hops

| Use for             | Name    | Amount | Time   | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil                | Magnum  | 20 g   | 60 min | 13.5 %     |
| Aroma (end of boil) | Marynka | 15 g   | 10 min | 4.5 %      |

## Yeasts

| Name                  | Type | Form | Amount | Laboratory |
|-----------------------|------|------|--------|------------|
| Danstar - Windsor Ale | Ale  | Dry  | 11 g   | Danstar    |

## Extras

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

|        |      |       |           |          |
|--------|------|-------|-----------|----------|
| Flavor | kawa | 50 g  | Boil      | 0 min    |
| Flavor | kawa | 100 g | Secondary | 2 day(s) |