

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) |