

**XXX**

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **45**
- SRM **38.7**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.4 liter(s)**
- Total mash volume **16.6 liter(s)**

### Steps

- Temp **72 C**, Time **60 min**
- Temp **80 C**, Time **15 min**

### Mash step by step

- Heat up **12.4 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **15 min** at **80C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount        | Yield | EBC  |
|-------|----------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt | 1 kg (24.1%)  | 80 %  | 5    |
| Grain | Pszeniczny           | 0.5 kg (12%)  | 85 %  | 4    |
| Grain | Słód owsiany Fawcett | 0.5 kg (12%)  | 61 %  | 5    |
| Grain | Żytni                | 0.5 kg (12%)  | 85 %  | 8    |
| Grain | Płatki owsiane       | 0.4 kg (9.6%) | 85 %  | 3    |
| Grain | Jęczmień palony      | 0.4 kg (9.6%) | 55 %  | 1000 |
| Grain | Abbey Malt Weyermann | 0.25 kg (6%)  | 75 %  | 45   |
| Grain | Carafa III           | 0.4 kg (9.6%) | 70 %  | 1034 |
| Grain | special x            | 0.2 kg (4.8%) | 70 %  | ---  |

### Hops

| Use for   | Name    | Amount | Time     | Alpha acid |
|-----------|---------|--------|----------|------------|
| Boil      | HBC 472 | 25 g   | 60 min   | 10.6 %     |
| Boil      | HBC 472 | 10 g   | 20 min   | 10.6 %     |
| Boil      | HBC 472 | 10 g   | 5 min    | 10.6 %     |
| Whirlpool | HBC 472 | 10 g   | 10 min   | 10.6 %     |
| Dry Hop   | HBC 472 | 10 g   | 3 day(s) | 10.6 %     |