

Ale porter

- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **28**
- SRM **18.6**
- Style **Belgian Dubbel**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **0 min**
- Evaporation rate **1 %/h**
- Boil size --- **liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **1.8 liter(s)**
- Total mash volume **2.3 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **74 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **1.8 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **10 min** at **74C**
- Keep mash **1 min** at **78C**
- Sparge using **-1.3 liter(s)** of **76C** water

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|--------------------------------|----------------|-------|-----|
| Grain | Caraaroma | 0.15 kg (3.7%) | 78 % | 400 |
| Grain | Special B Castle | 0.2 kg (4.9%) | 70 % | 350 |
| Liquid Extract | Gozdawa ekstrakt słodowy jasny | 3.1 kg (75.6%) | 80 % | 20 |
| Grain | Viking Pilsner malt | 0.15 kg (3.7%) | 82 % | 6 |
| Sugar | Cukier | 0.5 kg (12.2%) | 100 % | 1 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Magnum | 15 g | 50 min | 13 % |
| Boil | Mandarina Bavaria | 13 g | 10 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Lallamand notthingam | Ale | Slant | 200 ml | Lipowa |