

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