Porter

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **39**
- SRM **27.1**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.1 liter(s)**
- Total mash volume **13.5 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **10.1 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **6 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg *(74.1%)*	80 %	5
Grain	Chocolate Malt (UK)	0.125 kg *(3.7%)*	73 %	887
Grain	Black (Patent) Malt	0.1 kg *(3%)*	55 %	985
Grain	Barley, Flaked	0.25 kg *(7.4%)*	70 %	4
Grain	Caramel/Crystal Malt - 40L	0.2 kg *(5.9%)*	74 %	79
Grain	Briess - Munich Malt 20L	0.2 kg *(5.9%)*	74 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	40 g	60 min	5.1 %
Aroma (end of boil)	East Kent Goldings	20 g	0 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - London ESB Ale	Ale	Liquid	10 ml	Wyeast Labs