

test test

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **51**
- SRM **35**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (50%)	81 %	4
Grain	Barley, Flaked	0.6 kg (15%)	70 %	4
Grain	Rye, Flaked	0.6 kg (15%)	78.3 %	4
Grain	Monachijski	0.4 kg (10%)	80 %	16
Grain	Carafa III	0.4 kg (10%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	24 g	60 min	13.3 %