## **Guinness clone**

- Gravity 12.1 BLG
- ABV 4.9 %
- IBU **32**
- SRM **26.5**
- Style Dry Stout

## **Batch size**

- Expected quantity of finished beer 11 liter(s)
- Trub loss 4 %
- Size with trub loss 11.4 liter(s)
- Boil time 90 min
- Evaporation rate 8 %/h
- Boil size 13.8 liter(s)

## **Mash information**

- Mash efficiency 90 %
- Liquor-to-grist ratio 3.5 liter(s) / kg Mash size 7.9 liter(s)
- Total mash volume 10.1 liter(s)

### **Steps**

- Temp 68 C, Time 60 min
  Temp 78 C, Time 10 min

## Mash step by step

- Heat up 7.9 liter(s) of strike water to 74.8C
- Add grains
- Keep mash 60 min at 68C
- Keep mash 10 min at 78C
- Sparge using 8.2 liter(s) of 76C water or to achieve 13.8 liter(s) of wort

### **Fermentables**

Туре	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	1.5 kg <i>(66.7%)</i>	83 %	6
Grain	Barley, Flaked	0.5 kg <i>(22.2%)</i>	70 %	4
Grain	Jęczmień palony	0.25 kg <i>(11.1%)</i>	55 %	985

# Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	5.1 %

### **Yeasts**

Name	Туре	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	