BITTER IV

- Gravity 11.9 BLG
- ABV 4.8 %
- IBU **30**
- SRM **6.3**
- Style Extra Special/Strong Bitter (English Pale Ale)

Batch size

- Expected quantity of finished beer 20 liter(s)
- Trub loss 5 %
- Size with trub loss 21 liter(s)
- · Boil time 90 min
- Evaporation rate 15 %/h
- Boil size 28.2 liter(s)

Mash information

- Mash efficiency 80 %
- Liquor-to-grist ratio 3.5 liter(s) / kg
- Mash size 15.8 liter(s)
- Total mash volume 20.3 liter(s)

Steps

- Temp 55 C, Time 1 min
 Temp 66 C, Time 60 min
 Temp 72 C, Time 15 min
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up 15.8 liter(s) of strike water to 60C
- Add grains
- Keep mash 1 min at 55C
- Keep mash 60 min at 66C
- Keep mash 15 min at 72C
- Keep mash 5 min at 76C
- Sparge using 16.9 liter(s) of 76C water or to achieve 28.2 liter(s) of wort

Fermentables

Туре	Name	Amount	Yield	EBC
Grain	Pale Ale Best	4.1 kg (90.9%)	80 %	6
Grain	Carahell Best	0.2 kg <i>(4.4%)</i>	75 %	30
Grain	Caraamber	0.2 kg <i>(4.4%)</i>	75 %	70
Grain	Chocolate Best	0.01 kg <i>(0.2%)</i>	75 %	900

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	East Kent Goldings	20 g	60 min	5.7 %
First Wort	East Kent Goldings	20 g	90 min	5.7 %
Boil	East Kent Goldings	10 g	5 min	5.7 %

Yeasts

Name	Туре	Form	Amount	Laboratory
Wyeast - 1728 Scottish Ale	Ale	Slant	200 ml	Wyeast Labs

Extras

Туре	Name	Amount	Use for	Time
Fining	Whirlfloc T	1.25 g	Boil	5 min