

# The BitterS

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **55**
- SRM **4**
- 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 **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **62 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **5 min** at **76C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (100%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	12.1 %
Boil	Fuggles	10 g	30 min	5.9 %
Boil	Fuggles	10 g	15 min	5.9 %
Boil	Fuggles	10 g	5 min	5.9 %
Boil	East Kent Goldings	10 g	30 min	5.4 %
Boil	East Kent Goldings	10 g	15 min	5.4 %
Boil	East Kent Goldings	10 g	5 min	5.4 %
Dry Hop	Fuggles	20 g	3 day(s)	5.9 %
Dry Hop	East Kent Goldings	5 g	3 day(s)	5.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	150 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorekwapnia	10 g	Boil	65 min