

## Special BITTER 03

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **8.5**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (52.1%)	80 %	5
Grain	Viking Golden ale	2 kg (41.7%)	80 %	14
Grain	Strzegom Karmel 150	0.3 kg (6.3%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	35 g	60 min	7 %
Aroma (end of boil)	Fuggles	30 g	5 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP002 - English Ale Yeast	Ale	Liquid	20 ml	---

### Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	4 g	Boil	10 min