

# bitters

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **34**
- SRM **8.9**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **25.8 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.9 liter(s)**
- Total mash volume **29.2 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**

## Mash step by step

- Heat up **21.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **32.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6.6 kg (90.4%)	80 %	5
Grain	Weyermann - Carared	0.2 kg (2.7%)	75 %	45
Grain	Weyermann Caramunich 3	0.5 kg (6.8%)	76 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	iuanga	34 g	60 min	10 %
Boil	izabela	23 g	10 min	5.8 %
Boil	sybilla	23 g	10 min	4.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	300 ml	Fermentis