

## extra bitter

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- Gravity **11.4 BLG**
- ABV ---
- IBU **59**
- SRM **5.6**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

### Steps

- Temp **67 C**, Time **80 min**

### Mash step by step

- Heat up **13.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **80 min** at **67C**
- Sparge using **20.2 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (90.9%)	81 %	4
Grain	Melanoiden Malt	0.2 kg (4.5%)	80 %	39
Grain	Weyermann - Carared	0.2 kg (4.5%)	75 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	15 g	60 min	14.3 %
Boil	Citra	20 g	55 min	12 %
Boil	Citra	30 g	5 min	12 %
Boil	Fuggles	20 g	5 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis