

## Bitter 36

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **34**
- SRM **4.5**
- Style **Standard/Ordinary Bitter**

### Batch size

- Expected quantity of finished beer **36 liter(s)**
- Trub loss **5 %**
- Size with trub loss **37.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **45.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

### Steps

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

### Mash step by step

- Heat up **24 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **29.5 liter(s)** of **76C** water or to achieve **45.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (50%)	80 %	5
Grain	Strzegom Wiedeński	2 kg (25%)	79 %	10
Grain	Karamel Pils Steinbach	1 kg (12.5%)	79 %	6
Grain	Żytni	1 kg (12.5%)	85 %	8

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	40 g	60 min	12 %
Boil	Cascade	30 g	10 min	6 %
Boil	Cascade	45 g	0 min	6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	22 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Fining	wirflock	1 g	Boil	5 min