

## Red Ale / Bitter

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **18**
- SRM **12.2**
- Style **Irish Red Ale**

### Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **42.7 liter(s)**
- Total mash volume **54.9 liter(s)**

### Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **42.7 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **32.8 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	10 kg (82%)	80 %	5
Grain	Biscuit Malt	0.5 kg (4.1%)	79 %	45
Grain	Weyermann - Melanoiden Malt	0.5 kg (4.1%)	40 %	53
Grain	Strzegom Monachijski typ I	1 kg (8.2%)	60 %	16
Grain	Strzegom Barwiący	0.2 kg (1.6%)	68 %	1300

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Ekuanot	20 g	60 min	14 %
Boil	Lublin (Lubelski)	30 g	30 min	4 %
Boil	Lublin (Lubelski)	30 g	5 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US 05	Ale	Slant	500 ml	Tak