

## Red ale

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- Gravity **12.1 BLG**
- ABV ---
- IBU **43**
- SRM **9.2**
- Style **Irish Red Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.1 liter(s)**

### Steps

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

### Mash step by step

- Heat up **18.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (93.5%)	85 %	7
Grain	Roast barley	0.05 kg (0.9%)	--- %	1300
Grain	Munich Malt	0.3 kg (5.6%)	80 %	18

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Millennium	25 g	60 min	15.5 %
Aroma (end of boil)	Bullion	25 g	5 min	7.75 %
Aroma (end of boil)	Ultra	25 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale