

# Red Ale

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **100**
- SRM **9.4**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **23 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **56.4C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (80%)	80 %	5
Grain	Karmelowy Czerwony	1 kg (20%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	50 g	50 min	13 %
Boil	Cascade PL	50 g	30 min	5.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis