

# Red

- Gravity **15.9 BLG**
- ABV ---
- IBU **52**
- SRM **14**
- Style **Red IPA**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **80 min**
- Evaporation rate **15 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **27.2 liter(s)**

## Steps

- Temp **64 C**, Time **60 min**
- Temp **71 C**, Time **15 min**
- Temp **77 C**, Time **4 min**

## Mash step by step

- Heat up **21.2 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **71C**
- Keep mash **4 min** at **77C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4 kg (66.1%)	85 %	7
Grain	Carared	1 kg (16.5%)	75 %	39
Grain	Chit Malt	0.75 kg (12.4%)	50 %	2
Grain	Caraaroma	0.1 kg (1.7%)	78 %	400
Grain	Caramunich Malt	0.1 kg (1.7%)	71.7 %	110
Grain	Weyermann - Melanoiden Malt	0.1 kg (1.7%)	81 %	53

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	30 min	16.7 %
Boil	Cascade	25 g	15 min	6.7 %
Boil	Octawia	20 g	10 min	7.1 %
Boil	Amarillo	20 g	5 min	9.5 %
Whirlpool	Amarillo	20 g	10 min	9.5 %
Whirlpool	Mosaic	10 g	10 min	10 %

Dry Hop	Mosaic	20 g	4 day(s)	10 %
Dry Hop	Cascade	30 g	4 day(s)	6 %
Dry Hop	Citra	20 g	4 day(s)	12 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
FM52 Amerykański Sen	Ale	Slant	300 ml	Fermentum Mobile