

# Bock

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **36**
- SRM **15.1**
- Style **Traditional Bock**

## 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 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	2.45 kg (39.5%)	81 %	4
Grain	Weyermann - Pale Ale Malt	3.05 kg (49.2%)	85 %	7
Grain	Weyermann Caramunich 3	0.5 kg (8.1%)	76 %	150
Grain	Fawcett - Pale Chocolate	0.2 kg (3.2%)	71 %	600

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	First Gold	50 g	60 min	7.5 %
Aroma (end of boil)	First Gold	50 g	0 min	7.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
M54 california lager	Lager	Liquid	200 ml	Mangrove jacks