

# Bock

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **33**
- SRM **17.5**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **80 min**
- Evaporation rate **12 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **20.9 liter(s)**
- Total mash volume **28.3 liter(s)**

## Steps

- Temp **63 C**, Time **15 min**
- Temp **72 C**, Time **50 min**

## Mash step by step

- Heat up **20.9 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **15 min** at **63C**
- Keep mash **50 min** at **72C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	4 kg (53.7%)	80 %	16
Grain	Strzegom Wiedeński	1.5 kg (20.1%)	79 %	10
Grain	Pilzneński	1 kg (13.4%)	81 %	4
Grain	Strzegom Karmel 150	0.5 kg (6.7%)	75 %	150
Grain	Viking melanoidynowy	0.3 kg (4%)	75 %	60
Grain	Strzegom Karmel 600	0.15 kg (2%)	68 %	601

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	70 min	11 %
Boil	Tradition	25 g	50 min	5.5 %
Aroma (end of boil)	Tradition	20 g	20 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	270 ml	Fermentis