

# BOCK

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **22**
- SRM **18**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **27.4 liter(s)**

## Steps

- Temp **63 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **20.6 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **20 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3.5 kg (51.1%)	79 %	22
Grain	Strzegom Wiedeński	1.5 kg (21.9%)	79 %	10
Grain	Strzegom Karmel 150	0.5 kg (7.3%)	75 %	150
Grain	Viking melanoidynowy	0.3 kg (4.4%)	75 %	60
Grain	Strzegom Karmel 600	0.15 kg (2.2%)	68 %	601
Grain	Strzegom Pilzneński	0.5 kg (7.3%)	80 %	4
Grain	płatki jęczmienne	0.4 kg (5.8%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	35 g	60 min	5.5 %
Aroma (end of boil)	Tradition	25 g	10 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M84 Bohemian Lager	Lager	Dry	23 g	Mangrove Jack's
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### Extras

Type	Name	Amount	Use for	Time
Fining	whirflook	1.2 g	Boil	10 min

### Notes

- karmel 600 na ostatnie 15 min zacierania  
*Jul 2, 2019, 10:13 PM*