

BOCK

- Gravity **16.4 BLG**
- ABV ---
- IBU **20**
- SRM **19.9**
- Style **Traditional Bock**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **32.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.7 liter(s)**
- Total mash volume **30.2 liter(s)**

Steps

- Temp **63 C**, Time **10 min**
- Temp **72 C**, Time **50 min**

Mash step by step

- Heat up **22.7 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **10 min** at **63C**
- Keep mash **50 min** at **72C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **32.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Monachijski	4.4 kg (58.3%)	--- %	---
Grain	Wiedeński	1.9 kg (25.2%)	--- %	---
Grain	Karmelowy	0.7 kg (9.3%)	--- %	150
Grain	Karmelowy	0.15 kg (2%)	--- %	600
Grain	Melanoidynowy	0.4 kg (5.3%)	--- %	80

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	H. Tradition	32 g	70 min	5 %
Boil	H. Tradition	24 g	20 min	5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager s 189	Lager	Dry	11.5 g	---