

Bock beta-0.3

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **23**
- SRM **14.1**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **29.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **22.1 liter(s)**
- Total mash volume **28.8 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **64 C**, Time **20 min**
- Temp **73 C**, Time **40 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **22.1 liter(s)** of strike water to **54.5C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **73C**
- Keep mash **0 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **29.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (52.2%)	80 %	4
Grain	Strzegom Monachijski typ I	2.6 kg (38.8%)	79 %	16
Grain	Karmelowy Czerwony	0.3 kg (4.5%)	75 %	59
Grain	Caraaroma	0.3 kg (4.5%)	78 %	400

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	40 g	90 min	4.5 %
Boil	Oktawia	20 g	10 min	7.1 %
Boil	Saaz (Czech Republic)	10 g	10 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Saflager S-23	Lager	Dry	23 g	Fermentis Division of S.I.Lesaffre
---------------	-------	-----	------	------------------------------------

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	3 g	Boil	10 min