

Bulbulator

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **31**
- SRM **11.1**
- Style **Doppelbock**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **12 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **43.2 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **65 C**, Time **120 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **36 liter(s)** of strike water to **53C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **120 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **-4.7 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	3 kg (41.7%)	79 %	16
Grain	Strzegom Wiedeński	2 kg (27.8%)	79 %	10
Grain	Pilzneński	2 kg (27.8%)	81 %	4
Grain	Biscuit Malt	0.1 kg (1.4%)	79 %	50
Grain	Strzegom Karmel 300	0.1 kg (1.4%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	30 g	100 min	9.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	300 ml	Fermentis