

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **33**
- SRM **6.6**
- Style **Vienna Lager**

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 **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **54 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **75 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **59.7C**
- Add grains
- Keep mash **10 min** at **54C**
- Keep mash **40 min** at **63C**
- Keep mash **15 min** at **75C**
- Keep mash **15 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	3.4 kg (69.4%)	79 %	10
Grain	Monachijski	0.6 kg (12.2%)	80 %	16
Grain	Strzegom Karmel 30	0.4 kg (8.2%)	75 %	30
Grain	Jęczmień niesłodowany	0.5 kg (10.2%)	75 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Brewers Gold	30 g	60 min	7.6 %
Boil	Saaz (Czech Republic)	25 g	20 min	4.5 %