

## 4b # Spinel - Salzburger Vienna Lager - więcej sodu i chmielu

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **38**
- SRM **12.7**
- Style **Vienna Lager**

### Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **39.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **48.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36.7 liter(s)**
- Total mash volume **48.9 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **36.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **23.6 liter(s)** of **76C** water or to achieve **48.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Vienna	5 kg (40.9%)	80.5 %	9
Grain	BESTMALZ - Best Minich	4 kg (32.7%)	80.5 %	16
Grain	Viking Pale Ale malt	3 kg (24.5%)	80 %	5
Grain	Czekoladowy	0.22 kg (1.8%)	60 %	788

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	45 g	60 min	15.5 %
Boil	Hallertau	50 g	5 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	100 ml	Fermentum Mobile