

## carale

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **40**
- SRM **6.3**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **26.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **50 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **77 C**, Time **1 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Caraamber	0.5 kg (10%)	75 %	59
Grain	Viking Pale Ale malt	4.5 kg (90%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	chmiel	150 g	20 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
s-33	Lager	Slant	200 ml	---

### Notes

- franekca.pl,tl  
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