

## pils caraaroma

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **39**
- SRM **9.3**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **29.3 liter(s)**

### Mash information

- Mash efficiency **96 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.1 liter(s)**

### Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **15 min**
- Temp **72 C**, Time **45 min**

### Mash step by step

- Heat up **14.9 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **72C**
- Sparge using **18.7 liter(s)** of **76C** water or to achieve **29.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	2 kg (47.1%)	81 %	4
Grain	Viking Pale Ale malt	2 kg (47.1%)	80 %	5
Grain	Caraaroma	0.25 kg (5.9%)	78 %	400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	10.5 %
Boil	Perle	25 g	30 min	7.3 %
Boil	Hersbrucker	30 g	15 min	2.8 %
Boil	Hersbrucker	20 g	5 min	2.8 %