

Kara Mustafa

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **22**
- SRM **7.9**
- Style **Vienna Lager**

Batch size

- Expected quantity of finished beer **28.6 liter(s)**
- Trub loss **5 %**
- Size with trub loss **30 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **36.5 liter(s)**

Mash information

- Mash efficiency **91 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.9 liter(s)**
- Total mash volume **29.5 liter(s)**

Steps

- Temp **54 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **22.9 liter(s)** of strike water to **58.9C**
- Add grains
- Keep mash **10 min** at **54C**
- Keep mash **40 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **20.2 liter(s)** of **76C** water or to achieve **36.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Vienna Malt	4 kg (61.1%)	81 %	8
Grain	Weyermann - Light Munich Malt	2 kg (30.5%)	82 %	14
Grain	Caramunich® typ I	0.25 kg (3.8%)	73 %	80
Grain	Weyermann - Cara Crystal	0.2 kg (3.1%)	78 %	150
Grain	wayermann - zakwaszajacy	0.1 kg (1.5%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Blanc	30 g	60 min	8.7 %
Boil	Saaz (Czech Republic)	30 g	10 min	3.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Saflager W 34/70	Lager	Dry	11.5 g	Fermentis
------------------	-------	-----	--------	-----------