

Red Lager

- Gravity **12.1 BLG**
- ABV ---
- IBU **33**
- SRM **12.6**
- Style **Vienna Lager**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.07 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **24.9 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **62 C**, Time **25 min**
- Temp **70 C**, Time **40 min**
- Temp **75 C**, Time **1 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **53.7C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **25 min** at **62C**
- Keep mash **40 min** at **70C**
- Keep mash **1 min** at **75C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.44 kg (70.1%)	80 %	4.5
Grain	Karmelowy Czerwony	1.47 kg (29.9%)	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Boil	lubelski	30 g	15 min	4.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Lager	Dry	11.5 g	Safbrew