

California lager

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **46**
- SRM **5.9**
- Style **California Common Beer**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	4 kg (80%)	80.5 %	4
Grain	Briess - Wheat Malt, White	0.5 kg (10%)	85 %	5
Grain	Acid Malt	0.15 kg (3%)	58.7 %	6
Grain	Cara munich	0.1 kg (2%)	--- %	160
Grain	Caramel/Crystal Malt - 20L	0.1 kg (2%)	75 %	39
Grain	Cara munich	0.15 kg (3%)	--- %	90

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Millenium	25 g	60 min	17.1 %
Aroma (end of boil)	Tahoma	25 g	0 min	7.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
M54 california lager	Lager	Dry	10 g	Mangrove jacks