

## Pale

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **22**
- SRM **4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **76C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Bel	5 kg (76.9%)	79 %	4
Grain	Corn, Flaked	0.5 kg (7.7%)	80 %	2
Grain	Rice, Flaked	0.5 kg (7.7%)	70 %	2
Grain	Briess - Vienna Malt	0.5 kg (7.7%)	77.5 %	7

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	20 g	60 min	6.3 %
Aroma (end of boil)	Hersbrucker	20 g	30 min	4.1 %
Aroma (end of boil)	Hallertau Mittelfruh	30 g	15 min	3.7 %
Dry Hop	Hallertau Mittelfruh	30 g	2 day(s)	3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M54 Californian Lager	Lager	Dry	11.5 g	Mangrove jacks ale yeast

### Extras

Type	Name	Amount	Use for	Time
Water Agent	gypsum	2 g	Boil	60 min
Fining	irish moss	5 g	Primary	7 day(s)