Test

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **28**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **14.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **21.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.75 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **16.9 liter(s)**

Steps

- Temp **50 C**, Time **0 min**
- Temp **67 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **54C**
- Add grains
- Keep mash **0 min** at **50C**
- Keep mash **50 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **21.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	1.5 kg *(42.1%)*	81 %	5
Grain	Weyermann - Pale Ale Malt	1.5 kg *(42.1%)*	85 %	7
Grain	Oats, Flaked	0.5 kg *(14%)*	80 %	2
Grain	Weyermann - Carapils	0.06 kg *(1.7%)*	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	5 g	60 min	13.5 %
Boil	Citra	5 g	0 min	13.5 %
Whirlpool	Citra	15 g	30 min	13.5 %
Whirlpool	Amarillo	15 g	30 min	9.5 %
Dry Hop	Citra	10 g	3 day(s)	13.5 %
Dry Hop	Amarillo	10 g	3 day(s)	9.5 %
Dry Hop	Citra	28 g	3 day(s)	13.5 %
Dry Hop	Amarillo	25 g	3 day(s)	9.5 %

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis