

aTAK cHMIELU ;)

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **62**
- SRM **8.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **28.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **67 C**, Time **75 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **75 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (76.9%)	85 %	7
Grain	Weyermann - Carapils	0.5 kg (7.7%)	78 %	4
Grain	Weyermann - Carared	0.5 kg (7.7%)	75 %	45
Grain	Weyermann - Melanoiden Malt	0.5 kg (7.7%)	81 %	53

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	50 g	60 min	13.2 %
Whirlpool	Cascade	50 g	10 min	6 %
Dry Hop	Amarillo	50 g	5 day(s)	9.5 %
Dry Hop	Citra	50 g	5 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis