

GREEN INVASION

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **56**
- SRM **5.7**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **1500 liter(s)**
- Trub loss **5 %**
- Size with trub loss **1575 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **1811.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **1350 liter(s)**
- Total mash volume **1800 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **1350 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **911.3 liter(s)** of **76C** water or to achieve **1811.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	225 kg (50%)	85 %	7
Grain	Weyermann - Bohemian Pilsner Malt	100 kg (22.2%)	81 %	4
Grain	Weyermann - Light Munich Malt	50 kg (11.1%)	82 %	14
Grain	Weyermann - Vienna Malt	50 kg (11.1%)	81 %	8
Grain	Weyermann - Pale Wheat Malt	25 kg (5.6%)	85 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	300 g	30 min	13.9 %
Boil	Columbus/Tomahawk/Zeus	300 g	30 min	13.8 %
Boil	Chinook	300 g	15 min	13.9 %
Boil	Columbus/Tomahawk/Zeus	300 g	15 min	13.8 %
Boil	Chinook	300 g	10 min	13.9 %

Boil	Columbus/Tomahawk/Zeus	300 g	10 min	13.8 %
Whirlpool	Columbus/Tomahawk/Zeus	500 g	40 min	13.8 %
Whirlpool	Chinook	500 g	40 min	13.9 %
Whirlpool	Simcoe	1500 g	50 min	13.7 %
Whirlpool	Citra	1500 g	40 min	12.3 %
Whirlpool	Amarillo	1500 g	40 min	8.3 %
Dry Hop	Citra	1500 g	8 day(s)	12.3 %
Dry Hop	Simcoe	1500 g	6 day(s)	13.7 %
Dry Hop	Amarillo	1500 g	4 day(s)	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	1000 g	---

Extras

Type	Name	Amount	Use for	Time
Fining	Mech	300 g	Boil	15 min
Water Agent	gips	300 g	Mash	60 min