

Uncle Sam

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **39**
- SRM **12.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **9 liter(s)**
- Trub loss **5 %**
- Size with trub loss **9.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **11.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.6 liter(s)**
- Total mash volume **8.8 liter(s)**

Steps

- Temp **62 C**, Time **75 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **6.6 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **75 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **6.9 liter(s)** of **76C** water or to achieve **11.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.5 kg (68.2%)	80 %	5
Grain	Viking Pilsner malt	0.6 kg (27.3%)	82 %	4
Grain	Strzegom Karmel 600	0.1 kg (4.5%)	68 %	601

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	6 g	60 min	13.5 %
Boil	Mosaic	6 g	20 min	12.1 %
Aroma (end of boil)	Citra	5 g	5 min	13.5 %
Aroma (end of boil)	Cascade	5 g	5 min	7.6 %
Boil	Cascade	5 g	10 min	7.6 %
Dry Hop	Citra	10.5 g	14 day(s)	13.5 %
Dry Hop	Cascade	10 g	14 day(s)	7.6 %
Dry Hop	Mosaic	6 g	14 day(s)	12.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale US-05	Ale	Dry	6 g	Fermentis
--------------	-----	-----	-----	-----------

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	2.5 g	Boil	15 min