

## Apa z trawą cytrynową

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **36**
- SRM **5.1**

### Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **41.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **47.6 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **30.4 liter(s)**
- Total mash volume **39.1 liter(s)**

### Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **30.4 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **25.9 liter(s)** of **76C** water or to achieve **47.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	8 kg (92%)	80 %	5
Grain	Weyermann Caramunich 3	0.2 kg (2.3%)	76 %	150
Grain	Płatki owsiane	0.5 kg (5.7%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	35 g	60 min	13 %
Aroma (end of boil)	Cascade	50 g	10 min	6 %
Aroma (end of boil)	Chinook	15 g	10 min	13 %
Dry Hop	Centennial	100 g	3 day(s)	10.5 %
Dry Hop	Amarillo	50 g	3 day(s)	9.5 %

### Yeasts

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

### Extras

Type	Name	Amount	Use for	Time
Spice	Trawa cytrynowa	20 g	Boil	5 min