

Apa do Jonasz

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **34**
- SRM **7.5**
- Style **American Pale Ale**

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 **5 %/h**
- Boil size **45.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **34.5 liter(s)**
- Total mash volume **46 liter(s)**

Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **2 min**

Mash step by step

- Heat up **34.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **22.9 liter(s)** of **76C** water or to achieve **45.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	11 kg (95.7%)	80 %	5
Grain	Weyermann Caramunich 3	0.5 kg (4.3%)	76 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	25 g	60 min	15.5 %
Aroma (end of boil)	Challenger	50 g	10 min	7 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	25 g	10 min	15.5 %
Dry Hop	vermelho	90 g	3 day(s)	6 %
Dry Hop	Oktawia	100 g	3 day(s)	7.1 %

Yeasts

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