

# APA POD GRAINFATHER

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- Gravity **12.9 BLG**
- ABV ---
- IBU **44**
- SRM **4.1**
- 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 **60 min**
- Evaporation rate **14 %/h**
- Boil size **28 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (90.9%)	80 %	5
Grain	Platki owsiane	0.5 kg (9.1%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	6 g	60 min	13 %
Boil	Motueka	50 g	15 min	8 %
Whirlpool	Motueka	50 g	30 min	8 %
Dry Hop	Enigma (AUS)	50 g	5 day(s)	17.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	11 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
Fining	mech	5 g	Boil	15 min

Water Agent	chlorek wapnia	25 g	Mash	60 min
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