

PAPA HH

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **40**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **29.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.9 liter(s)**
- Total mash volume **21.7 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **16.9 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **29.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński optima	4 kg (82.8%)	82.6 %	4
Grain	monachijski Typ I Viking Malt	0.83 kg (17.2%)	78 %	18

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	lunga	15 g	90 min	9.5 %
Boil	Cascade PL	20 g	20 min	5.5 %
Boil	Chinook PL	20 g	20 min	8.6 %
Boil	Chinook PL	20 g	7 min	8.6 %
Boil	Cascade PL	20 g	7 min	5.5 %
Aroma (end of boil)	Cascade PL	35 g	0 min	5.5 %
Aroma (end of boil)	Chinook PL	35 g	0 min	8.6 %
Dry Hop	Cascade PL	25 g	4 day(s)	5.5 %
Dry Hop	Chinook PL	25 g	4 day(s)	8.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Hothead	Ale	Slant	100 ml	gestwa po 33

Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc T	1 g	Boil	10 min