

PAPA

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **39**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **28.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **65 C**, Time **90 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **90 min** at **65C**
- Keep mash **10 min** at **76C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale Malteurop	5 kg (90.9%)	80 %	8
Grain	Słód Carahell (R)	0.25 kg (4.5%)	75 %	25
Grain	pszeniczny Malteurop	0.25 kg (4.5%)	80 %	6

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
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Safale US-05	Ale	Dry	11.5 g	---
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Extras

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