

PAPA

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **41**
- SRM **4.7**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **13.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale	4 kg (90.9%)	83 %	5
Grain	Strzegom Karmel 30	0.4 kg (9.1%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Vic Secret	10 g	60 min	16.3 %
Boil	Simcoe	5 g	60 min	13.2 %
Boil	Vic Secret	10 g	10 min	16.3 %
Boil	Simcoe	5 g	10 min	13.2 %
Boil	Vic Secret	10 g	5 min	16.3 %
Boil	Simcoe	5 g	5 min	13.2 %
Boil	Vic Secret	10 g	0 min	16.3 %
Boil	Simcoe	5 g	0 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	Fermentis