

Papa

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **19**
- SRM **3.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **25.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (100%)	82 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	15 g	60 min	10.5 %
Aroma (end of boil)	Oktawia	35 g	0 min	9.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Liquid	500 ml	Fermentum Mobile