

# Józef na misji

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **15**
- SRM **3.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **64.5 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **71.9C**
- Add grains
- Keep mash **60 min** at **64.5C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (100%)	80 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	25 g	15 min	12 %
Aroma (end of boil)	Citra	25 g	0 min	12 %
Whirlpool	Citra	25 g	0 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	10 g	---

## Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	4 g	Boil	10 min
Flavor	Glukoza	500 g	Boil	5 min