

# Mackinac Enigma IPA

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **21**
- SRM **4.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **14.4 liter(s)**

## Steps

- Temp **72 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **10.8 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.5 kg (69.4%)	82 %	4
Grain	Viking Wheat Malt	0.5 kg (13.9%)	83 %	5
Grain	Weyermann - Carapils	0.3 kg (8.3%)	78 %	4
Grain	Oats, Flaked	0.3 kg (8.3%)	80 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Mackinac	40 g	15 min	13 %
Dry Hop	Mackinac	60 g	3 day(s)	13 %
Dry Hop	Enigma (AUS)	30 g	3 day(s)	18.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	150 g	Fermentis

## Notes

- Woda RO:Kran 1:1  
Chlorek Wapnia dodany do zacierania 2ml  
Woda do wyładzania zakwaszone do 5.6Ph  
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