

# Mackinac IPA

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **23**
- SRM **4.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **30 min**
- Evaporation rate **10 %/h**
- Boil size **26.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.9 liter(s)**
- Total mash volume **27.8 liter(s)**

## Steps

- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **20.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **30 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (67.1%)	82 %	4
Grain	Płatki owsiane	1.15 kg (15.4%)	60 %	3
Grain	Płatki pszeniczne	0.8 kg (10.7%)	60 %	3
Sugar	Milk Sugar (Lactose)	0.5 kg (6.7%)	76.1 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Nelson Sauvín	10 g	15 min	10.7 %
Whirlpool	Nectarón	25 g	15 min	9.9 %
Whirlpool	Zula	55 g	15 min	13.3 %
Dry Hop	Mackinac CP	200 g	3 day(s)	10.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lutra	Ale	Slant	50 ml	---

## Notes

- Woda RO modyfikowana:

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Zacieranie 25L - chlorek wapnia 5 gr, gips 2,5 gr  
Wysładzanie 7L - chlorek wapnia 4,5 gr , gips 2,25

Do gotowania dorzucić ( po przeliczeniu do objętości )

Epsom - 1.7g/10L

NaCl - 0.6g/10L

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