

# 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  
Wystadzanie 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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