

# micro-penis

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- Gravity **9.5 BLG**
- ABV **3.7 %**
- IBU **40**
- SRM **5.1**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.3 liter(s)**
- Total mash volume **13.3 liter(s)**

## Steps

- Temp **65 C**, Time **40 min**
- Temp **68 C**, Time **10 min**
- Temp **72 C**, Time **10 min**

## Mash step by step

- Heat up **10.3 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **10 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt       | 2.5 kg (84.7%) | 80 %  | 6   |
| Grain | Strzegom Monachijski typ I | 0.3 kg (10.2%) | 79 %  | 16  |
| Grain | Carahell                   | 0.1 kg (3.4%)  | 77 %  | 26  |
| Grain | Karmelowy żytni Strzegom   | 0.05 kg (1.7%) | 75 %  | 150 |

## Hops

| Use for | Name   | Amount | Time   | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil    | Simcoe | 10 g   | 20 min | 13.2 %     |
| Boil    | Mosaic | 10 g   | 30 min | 10 %       |
| Boil    | Comet  | 10 g   | 10 min | 8.3 %      |
| Boil    | Simcoe | 5 g    | 60 min | 13.2 %     |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale  | Dry  | 11 g   | ---        |