

## 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	---