

## 54-IPA-24.04.2019

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- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **43**
- SRM **8.4**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **14.7 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

### Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **45 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **6.7 liter(s)** of **76C** water or to achieve **14.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (87.5%)	80 %	4
Grain	Karmelowy Czerwony	0.5 kg (12.5%)	75 %	59

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	8.8 %
Boil	Cascade	40 g	10 min	7.1 %
Dry Hop	Nelson Sauvín	50 g	5 day(s)	11 %
Aroma (end of boil)	Centennial	40 g	1 min	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	5.5 g	Mangrove Jack's