

## #121 ctrl+E

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **36**
- SRM **4.1**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20.4 liter(s)**
- Trub loss **6 %**
- Size with trub loss **22.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **24.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.9 liter(s)**

### Steps

- Temp **69 C**, Time **90 min**

### Mash step by step

- Heat up **16.6 liter(s)** of strike water to **76.9C**
- Add grains
- Keep mash **90 min** at **69C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **24.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2.1 kg (39.3%)	82 %	4
Grain	Viking Wheat Malt	2.1 kg (39.3%)	83 %	5
Grain	Vienna Malt	0.4 kg (7.5%)	78 %	8
Grain	Płatki owsiane	0.4 kg (7.5%)	60 %	3
Grain	Słód enzymatyczny	0.2 kg (3.7%)	80 %	5
Grain	Płatki pszeniczne	0.15 kg (2.8%)	60 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle PL 2018	50 g	60 min	5 %
Boil	Amarillo US 2020	10 g	20 min	8.7 %
Aroma (end of boil)	Mosaic US 2019	10 g	10 min	12.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	30 ml	Fermentum Mobile