

## Piątek 13-go

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **67**
- SRM **5.6**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **2 %**
- Size with trub loss **42.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **49.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **48 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **10 min**
- Temp **100 C**, Time **75 min**

### Mash step by step

- Heat up **36 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **76C**
- Keep mash **75 min** at **100C**
- Sparge using **25.3 liter(s)** of **76C** water or to achieve **49.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) US	10.4 kg (86.7%)	79 %	4
Grain	Weyermann - Carapils	0.8 kg (6.7%)	78 %	4
Grain	Weyermann - Carared	0.8 kg (6.7%)	75 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Horizon	80 g	70 min	12 %
Boil	Horizon	40 g	10 min	12 %
Boil	Cascade	40 g	10 min	6 %
Aroma (end of boil)	Cascade	120 g	0 min	6 %
Aroma (end of boil)	Simcoe	40 g	0 min	13.2 %
Dry Hop	Citra	60 g	7 day(s)	12 %
Dry Hop	Amarillo	60 g	7 day(s)	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

US-05	Ale	Dry	46 g	---
-------	-----	-----	------	-----