

## #4 lunga Single Hop Pale Ale

- Gravity **14.5 BLG**
- ABV ---
- IBU **77**
- SRM **4.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **34.5 liter(s)**

### Mash information

- Mash efficiency **86.5 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **21 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **25.5 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (83.3%)	80 %	4
Grain	Pszeniczny	0.5 kg (8.3%)	85 %	3
Grain	Strzegom Karmel 30	0.5 kg (8.3%)	80 %	40

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	40 g	60 min	11.8 %
Boil	lunga	50 g	15 min	11.8 %
Boil	lunga	60 g	5 min	11.8 %
Dry Hop	lunga	50 g	7 day(s)	11.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
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Fining	Mech Irlandzki	5 g	Boil	10 min
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