

## #39 Pine Lemon Black IPA

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **47**
- SRM **18.7**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **3 %**
- Size with trub loss **20.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **23.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **11.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **0 min** at **78C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3 kg (78.9%)	79 %	6
Grain	Strzegom Czekoladowy jasny	0.1 kg (2.6%)	68 %	400
Grain	Carafa	0.3 kg (7.9%)	70 %	664
Grain	Rye, Flaked	0.4 kg (10.5%)	78.3 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pekko	10 g	60 min	13.6 %
Boil	Cashmere	10 g	60 min	7 %
Boil	Pekko	20 g	10 min	13.6 %
Boil	Cashmere	20 g	10 min	7 %
Whirlpool	Pekko	20 g	0 min	13.6 %
Whirlpool	Cashmere	20 g	0 min	7 %
Dry Hop	Pekko	50 g	4 day(s)	13.6 %
Dry Hop	Cashmere	50 g	4 day(s)	7 %

### Yeasts

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

Type	Name	Amount	Use for	Time
Flavor	Limonka blend	150 g	Boil	10 min
Flavor	Pędy sosny	20 g	Secondary	7 day(s)
Flavor	Skórka z cytryny	50 g	Secondary	7 day(s)