

# ipa

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **108**
- SRM **35.2**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **26.6 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **20.7 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **22.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	viking enzymatyczny	2 kg (33.9%)	76 %	7
Grain	viking caramel pale	1 kg (16.9%)	77 %	8
Grain	wędzony brzoza	0.8 kg (13.6%)	81 %	10
Grain	viking caramel aromatic	0.5 kg (8.5%)	75 %	180
Grain	Buckwheat, Flaked	0.2 kg (3.4%)	75 %	4
Grain	Płatki pszeniczne	0.2 kg (3.4%)	85 %	3
Grain	Płatki owsiane	0.2 kg (3.4%)	85 %	3
Grain	Płatki orkiszowe	0.2 kg (3.4%)	80 %	4
Grain	Barley, Flaked	0.2 kg (3.4%)	70 %	4
Grain	Millet, Flaked	0.2 kg (3.4%)	75 %	3
Grain	Strzegom Barwiący	0.4 kg (6.8%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Nugget	30 g	90 min	13 %
Whirlpool	Ariana	60 g	30 min	8.9 %

Whirlpool	Nugget	30 g	30 min	13 %
Whirlpool	Columbus/Tomahawk/Zeus	30 g	30 min	15.5 %
Dry Hop	Simcoe	30 g	5 day(s)	13.2 %
Dry Hop	Amarillo	30 g	5 day(s)	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Slant	200 ml	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	5 g	Boil	15 min