

# wungiel ipa

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **67**
- SRM **22.2**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.01 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **21.3 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **67 C**, Time **15 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **15 min** at **67C**
- Keep mash **90 min** at **67C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.6 kg (86.8%)	80 %	5
Grain	Carafa II	0.2 kg (3.8%)	70 %	812
Grain	Strzegom Czekoladowy 400	0.3 kg (5.7%)	68 %	400
Grain	Strzegom Czekoladowy 400	0.2 kg (3.8%)	68 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Bravo	25 g	60 min	15.5 %
Boil	Dr Rudi	25 g	20 min	11.8 %
Boil	chłodnica	0 g	10 min	1 %
Boil	Cascade	15 g	15 min	6 %
Boil	Cascade	15 g	5 min	6 %
Boil	Cascade	20 g	1 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	---

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	4 g	Boil	15 min