

## IPA - gładkie cięcie #5

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- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **81**
- SRM **4**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **26 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.3 liter(s)**
- Total mash volume **21.7 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.3 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **22 liter(s)** of **76C** water or to achieve **32.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1 kg (18.5%)	80 %	5
Grain	Biscuit Malt	0.07 kg (1.3%)	79 %	45
Grain	Płatki pszeniczne	0.25 kg (4.6%)	85 %	3
Grain	Strzegom Monachijski typ I	0.6 kg (11.1%)	79 %	16
Grain	Strzegom Pilzneński	3.5 kg (64.6%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Chinook	10 g	60 min	13 %
Boil	Cascade PL	7 g	30 min	5.2 %
Boil	Columbus/Tomahawk/Zeus	14 g	30 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	5 min	15.5 %
Boil	Cascade PL	15 g	5 min	5.2 %
Boil	Citra	15 g	5 min	12 %

Whirlpool	Columbus/Tomahawk/Zeus	15 g	30 min	15.5 %
Whirlpool	Cascade PL	35 g	30 min	5.2 %
Whirlpool	Citra	35 g	30 min	12 %
Dry Hop	Citra	30 g	4 day(s)	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	160 ml	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Spice	Curacao, suszona skórka gorzkiej pomarańczy	15 g	Boil	10 min

### Notes

- wyszło 25,5L - 12blg  
odfermentowało do 3blg przed chmieleniem na zimno  
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