

## Wądroże IPA #3

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- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **104**
- SRM **6.3**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **6 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **28.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

### Steps

- Temp **55 C**, Time **20 min**
- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **24.5 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **11.3 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Wayermann Pale Ale	5 kg (71.4%)	84 %	7
Grain	Carahell	1 kg (14.3%)	77 %	26
Grain	Weyermann - Carapils	1 kg (14.3%)	78 %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	30 min	15 %
Boil	Enigma	30 g	60 min	17.2 %
Boil	Simcoe	30 g	5 min	13.3 %
Boil	Summit	30 g	15 min	14.3 %
Boil	Chinook	30 g	5 min	12.8 %

### Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Herb	ekstrakt chmielowy	2.5 g	Bottling	---