

# GRUDNIOWA IPA

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **25**
- SRM **4.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **5 %**
- Size with trub loss **66 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **72.5 liter(s)**

## Mash information

- Mash efficiency **81 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **44.6 liter(s)**
- Total mash volume **62.5 liter(s)**

## Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **80 C**, Time **15 min**

## Mash step by step

- Heat up **44.6 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **15 min** at **80C**
- Sparge using **45.8 liter(s)** of **76C** water or to achieve **72.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	12 kg (67.2%)	80 %	4
Grain	Weyermann - Carapils	1 kg (5.6%)	78 %	4
Grain	Płatki owsiane	2 kg (11.2%)	85 %	3
Grain	Weyermann - Acidulated Malt	0.35 kg (2%)	80 %	6
Grain	weyermann - CARAAROMA	0.5 kg (2.8%)	70 %	---
Grain	Weyermann - Pale Ale Malt	2 kg (11.2%)	85 %	7

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	40 min	10 %
Boil	Marynka	30 g	30 min	10 %
Boil	Marynka	30 g	20 min	10 %
Whirlpool	Chinook	30 g	10 min	13 %

Dry Hop	Citra	60 g	5 day(s)	12 %
Aroma (end of boil)	Chinook	60 g	1 min	13 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	44 g	Fermentis